

Canadian Petroleum Industry
1987 Monitoring Report

Annual

Copies of this report are available on request from
Communications Branch
Department of Energy, Mines and Resources
580 Booth Street
Ottawa, Ontario
K1A 0E4

Aussi disponible en français

The Honourable Marcel Masse
Minister of Energy, Mines and Resources
Ottawa, Ontario

Dear Minister:

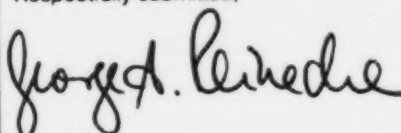
I am pleased to submit the attached report which describes the financial performance of the oil and gas industry in Canada during 1987.

The release of the report occurs at a time when there are few if any contentious issues between industry and government. The industry is largely left to its own devices, and subject to the forces of the market place. Price uncertainty continues to affect discretionary upstream spending.

In 1987, the petroleum industry experienced a partial recovery from the dramatic downturn of 1986. Industry cash flow rose 22% to \$9.4 billion in 1987. Net income was \$3.4 billion versus a loss of \$2.7 billion in 1986, the 1987 level being roughly equal to that of 1985. The principal reason for the net income turn around in 1987 was the absence of extraordinary write-downs of assets which amounted to more than \$3 billion in 1986. In addition, higher crude oil prices, lower provincial royalties and the elimination of the Petroleum and Gas Revenue Tax (PGRT) contributed to improved results.

Capital outlays developed largely in line with spending plans established in the Fall of 1986 following the elimination of the PGRT. The reinvestment rate rose to 90% during the last six months of 1987 due to relatively stable prices and improved drilling incentives, up from 59% for the first half of the year. The average for the full year 1987 was 75%.

Respectfully submitted,



George A. Reinecke
Director

July 22, 1988

New and Notable

Once again we feel it prudent to bring to your attention that some new information is presented in this Monitoring Report and that the report should be read with a number of qualifications.

New

- In the 1987 annual survey questionnaire, flow-through share financing information was incorporated into the capital expenditure schedule. This together with comparable information for 1986 obtained through the tax-related part of the semi-annual survey questionnaire provide data for comparison.
- Proceeds from flow-through financing by PMA reporting companies totalled \$115 million in 1987, which represents a 40% increase compared to \$80 million in 1986. However, this financing vehicle provided less than 3% of total exploration and development spending.
- A new table (Appendix B14) shows the breakdown of capital employed by sector and segment.
- The report presents a nine-year overview of selected financial data for upstream operations which is located at page 41 in the multi-year segment of the report. In addition, two tables providing a nine-year perspective for both upstream and downstream are presented in Appendix A23.
- The chapter on Revenue Sharing previously reported for each full year has been deferred until the publication of the 1988 semi-annual report, and after consultation on the contents has occurred with industry and governments.

Appendix D, 'PMA Terms of Reference', has been expanded in the area of ownership and control determination (page 86), and now details the considerations underlying the Agency's methodology of reaching such determinations.

Notable

- In 1986, asset write-offs totalling nearly \$3 billion were reported by companies using the full cost method of accounting, in response to the new CICA guideline. In 1987 further write-offs were not required largely due to the stabilization of crude oil prices.
- Extraordinary dividends in 1986 of almost \$1 billion paid by two foreign-controlled companies pushed dividend payments to a record high. Since such payments did not recur in 1987, dividends paid in 1987 were consistent with pre-1986 trends.
- The reorganization of a company into a number of separate publicly traded companies resulted in the emergence of a new accounting and reporting entity operating in significantly changed business circumstances. The 'other Canadian operations' of that enterprise are no longer included with the reporting company for 1987. A discontinuity has therefore occurred in financial data between 1986 and 1987, with a substantial reduction in long-term assets, property, plant and equipment, long-term debt and retained earnings.

- The Canadian petroleum industry underwent significant restructuring in 1987, due to numerous acquisitions and mergers. Of particular interest were the following:
 - Encor Energy Corporation Ltd. purchased Aberford Resources Ltd.
 - Westcoast Transmission Company Limited purchased 69% of Canadian Roxy Petroleum Ltd. and bought the western Canadian oil and gas assets of AGIP Canada Ltd.
 - Saskatchewan Oil and Gas Corporation purchased Thomson-Jensen Energy Ltd.
 - Husky Oil Ltd. became a private company, indirectly owned 43% by Nova, an Alberta Corporation, 43% by Hutchison Whampoa Ltd. and Cavendish International Holdings Limited of Hong Kong, 9% by V.T.K. Li and 5% directly by the Canadian Imperial Bank of Commerce.
 - Imperial Oil Limited purchased the oil and gas assets of Sulpetro Ltd. and Sulbath Explorations Ltd.
 - Gulf Canada Limited reorganized into three public companies: Gulf Canada Resources Ltd., Abitibi-Price Inc., and G.W. Utilities Ltd.
 - Renaissance Energy Ltd. purchased control of Emir Oils Ltd.
 - Poco Petroleum Ltd. acquired 89.9% of Bonanza Oil & Gas Ltd. and Ethicorp Resources Ltd.

- Total Erickson Resources Ltd. acquired a controlling interest in Trans-Canada Resources Ltd.
- Sceptre Resources Ltd. purchased SOQUIP Alberta Inc.
- TransCanada PipeLines Ltd. acquired Encor Energy Corp.
- Voyager Energy Inc. increased its share in Voyager Energy Co. from 50% to 100%.
- United Coal (Canada) Ltd. purchased Star Oil & Gas Ltd.
- Co-Enerco acquired Bedford Petroleum Ltd.
- Mark Resources Inc. bought Parasol Oil & Gas Ltd.
- Enfield Corp. Ltd. purchased 32.5% of Numac Oil & Gas Ltd.
- Numac Oil & Gas Ltd. acquired 84% of Giant Reef Petroleum.
- Royal Trust Energy Corp. bought the oil and gas properties of Sherritt Gordon Mines Ltd.
- Suncor acquired 19.5% of Oakwood Petroleum Ltd.
- Enerplus Resources Corp. purchased Westburne Petroleum and Minerals Ltd.

- Full implementation of the 1987 change in the control status of Husky Oil Ltd. – from Canadian controlled to foreign controlled – has been deferred to future monitoring reports, thereby providing a more meaningful comparison of 1986 and 1987 data in Chapters 1 and 2 of this report. However, in Chapter 4 which deals with Canadian ownership and control of the industry, the reclassification has been implemented for 1987. It has the effect of transferring about 1.5% of petroleum-related revenues of the petroleum industry from the Canadian-controlled to the foreign-controlled category.

In making this control status decision, it is recognized that active and immediate control of Husky Oil Ltd. rests with Nova, an Alberta Corporation, which is Canadian controlled. However, complex and detailed provisions of the Shareholders' Agreement may be invoked by Union Faith Canada Holdings Ltd., a foreign-controlled shareholder, which would shift the locus of control. The PMA definition of control focuses on potential control, and thus the Agency places substantial weight on these provisions.

- Appendix A1 'Year in Review' sets out in detail events worthy of note.
- Many numbers in the body of the report are rounded to improve readability. Percentage changes, however, are calculated on the basis of detailed figures shown in Appendix B.
- While 135 companies have reported to the PMA (see Appendix F), the report is based on data from 129 companies. Six companies have been excluded due to the lack of comparable data for the preceding period.

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Summary and Highlights

Financial Performance

Total Operations

- Profits: *Net income from total operations amounted to \$3.4 billion in 1987 compared with a loss of \$2.7 billion in 1986.* The collapse in international oil prices during 1986, and the subsequent write-down of over \$3 billion in the book value of oil and gas properties contributed to the weakest financial performance in the history of the petroleum industry. In 1987 no further write-downs were required. In addition, reduced non-cash charges, interest payments, operating costs, the elimination of PGRT, and reduced provincial royalty rates resulted in the improvement in net income.

Partly offsetting these positive factors were lower natural gas prices, higher sales and excise taxes on downstream operations, and higher current and deferred income taxes.

- Net income for foreign-controlled companies more than tripled to \$2.3 billion as profits rose in all business segments. Net income for Canadian-controlled companies at \$1.1 billion in 1987 was in sharp contrast to a loss of \$3.5 billion in 1986, largely due to asset write-downs. All business segments except downstream operations reported improvements.
- The rate of return on shareholders' equity for the total Canadian petroleum industry was 9.1% in 1987 against a negative 7.1% in 1986. The average rate of return on equity for the five-year period ending in 1987 rose to 4.7% from an average of 4% ending in 1986. The return on the capital employed by the Canadian petroleum industry in 1987 rose to 6.4% from a negative 0.8% in 1986.

Upstream Operations

- Total upstream revenues rose 4.9% to \$17.8 billion in 1987 over 1986 due to increased crude oil production and the partial recovery of crude oil prices. Upstream net income rose from a loss of \$1.8 billion in 1986 to a profit of \$2.2 billion in 1987 due in part to extraordinary asset write-downs of \$2 billion in 1986 versus gains of \$160 million in 1987. In addition, net income was favourably affected by the elimination of PGRT, lower royalties, lower interest charges, reduced operating costs and lower non-cash charges. Partly offsetting these reductions were higher current and deferred taxes. Upstream return on capital employed rose to 6.7% from a negative 0.8% in 1986. Upstream cash flow rose 29% or \$1.5 billion to \$6.8 billion.

Downstream Operations

- Total downstream revenues rose 2% to \$27.4 billion as a result of higher sales volumes and higher federal sales and excise taxes. Net income rose 7% to \$900 million in 1987 from \$845 million in 1986 due to greater demand for petrochemicals, which more than offset reductions in refining and marketing profitability. The latter activity recorded a reduction in gross profit margin of nearly 0.3¢/litre. The return on capital employed for refining and marketing declined to 6.5% in 1987 from 6.9% in 1986.

Sources and Uses of Funds

Internal Cash Flow

- Internal cash flow from total operations rose 22% to \$9.4 billion in 1987 with increases in all business segments. Upstream and downstream cash flow rose 29% and 3% respectively, while that for other Canadian operations and foreign activities increased 16% and 10% respectively.

Net External Sources

- Net external sources were negative, \$2 billion in 1987 – a decrease of \$2.9 billion compared with 1986; this means that the petroleum industry was a net supplier of funds to other sectors of the Canadian economy. Redemptions of long-term debt exceeded new issues by \$3.6 billion, while new equity net of repayments was \$1.5 billion in 1987.

Discretionary Uses

- In 1987, the industry increased its net capital outlay by 3% to \$7 billion due to an increase in spending in the latter half of 1987. Dividend payments fell from \$2.6 billion to \$1.5 billion in 1987. The excess of "All Other Sources" over "All Other Uses" resulted from the transfer of funds due to the reorganization of corporate activities and the sale of corporate assets. The net draw-down of working capital of \$2.4 billion in 1986 was in sharp contrast to the unchanged working capital in 1987.

- **PIP and CEDIP Grants:** Total grants were down from \$815 million in 1986 to \$265 million in 1987 – reflecting the termination of the PIP program.

Capital Expenditures

- Total Capital Expenditures in 1987 decreased 6% or \$440 million to \$7.5 billion, as a 5% decline in expenditures in Canada combined with a 13% drop in outlays abroad. Upstream spending, representing 73% of the total, declined 12% to \$5.5 billion.
- Exploration Expenditures in Canada decreased 18% to \$2.7 billion in 1987. Expenditures increased 12% in the provinces but fell 66% on the Canada Lands. The latter accounted for 15% of the total in 1987 compared with 37% in 1986. Foreign-controlled companies increased their outlays by 4% vs. a 28% decrease by Canadian-controlled companies.

- Downstream Expenditures rose 47% to \$1.2 billion in 1987 over 1986. Increased expenditures on refineries, heavy oil upgrading, pipelines and marketing outlets more than offset declines in spending on petrochemical plants.

Reinvestment Rates

- Net capital expenditures absorbed 75% of the industry's internal cash flow in 1987 down from 88% in 1986. Upstream capital expenditures totalled 74% of cash flow from upstream operations, down 24 percentage points from 1986.

Dividends

- Dividends declined 40% to \$1.5 billion in 1987. Dividends by Canadian-controlled companies declined 17% to \$495 million yielding a payout rate of 47%. Payments by foreign-controlled companies fell by 47% to \$1 billion for a payout rate of 45%.

Comparative Performance: Petroleum and Other Industries

Net Income

- According to Statistics Canada data, the petroleum industry's net income from Canadian operations – exclusive of Crown corporation results – increased from a loss of \$1.8 billion in 1986 to a profit of \$3.2 billion in 1987 and compared with a 37% rise in the net income of all other non-financial industries in Canada. The petroleum industry's net income for 1987 represented 14% of all non-financial industries' net income. Although 14% of the total compares very favourably against the particularly poor results in 1986, it is still well below the level of prior years (1983 excepted).

Capital Expenditures

- The petroleum industry's capital expenditures in Canada increased 3% in 1987. Capital expenditures of other non-financial industries increased 10% with the result that the petroleum industry represented 18% of total non-financial industries' capital expenditures in 1987 compared to 19% in 1986.

Ownership and Control Trends

Canadian ownership of the petroleum industry based on upstream revenues, declined from 46.7% in 1986 to 45.1% in 1987, and Canadian control decreased from 49% to 45.2% in 1987. Canadian ownership and control of total petroleum-related revenues – upstream plus downstream – were down 1.3 and 3 percentage points in 1987 over 1986 to reach 43.8% and 37.4% respectively mainly as a result of takeover activity following the 1986 collapse of crude oil prices.

Research and Development Activities

The petroleum industry spent \$231 million on Research and Development (R&D) activities in 1987, down 5% from 1986. 'In-house' R&D expenditures were \$143 million in 1986, down from \$167 million in 1985. Contract work performed by others totalled \$88 million, up 14% from 1986.

Five-Year Operating Summary: 1983-1987

Noteworthy trends:

- *Revenues* fell by 17% to \$49.2 billion from 1983 to 1987, representing an overall annual rate of decline of 4.3%.
- *Net income*, which reached a peak of \$3.7 billion in 1984, fell to its lowest point in 1986 with a loss of \$2.7 billion before partially recovering in 1987 at \$3.4 billion.
- *Cash flow* in 1987 as a percentage of revenues represented a high of 18.9% compared with the previous high of 17.3% in 1985.
- *Capital expenditures*, which peaked in 1985 at \$12.1 billion, fell to their lowest level in five years at \$7.4 billion in 1987.
- *Dividends* rose steadily between 1983 and 1985, climbed sharply in 1986 to \$2.6 billion, and then settled back in 1987 to \$1.5 billion.

Financial Performance

Total Operations: Net Income and Cash Flow

The financial picture of the petroleum industry improved considerably in 1987 as net income from total operations amounted to \$3.4 billion compared with a loss of \$2.7 billion in 1986. The collapse in international oil prices during 1986, and the subsequent write-down of over \$3 billion in the book value of oil and gas properties in Canada and abroad contributed to the weakest financial performance in the history of the petroleum industry. In 1987 no further write-downs were required. In addition, companies reported reduced depreciation, depletion and other non-cash write-offs. This, together with the elimination of PGRT and the reduction of provincial royalty rates and royalty holidays, resulted in upstream net income increasing \$4 billion from a loss of \$1.8 billion in 1986 to a profit of \$2.2 billion in 1987. Downstream net income was \$55 million (7%) greater at \$900 million due to improvements in the

petrochemical segment and the non-recurrence of write-offs in 1987. Other Canadian operations recovered from a loss of \$815 million (due to write-offs) in 1986 to a profit of \$235 million in 1987. Similarly, foreign operations improved from a loss of \$940 million in 1986, largely due to write-downs of petroleum assets held abroad, to a net income of \$75 million in the current period.

Total industry cash flow from operations rose \$1.7 billion (22%) to \$9.4 billion due to:

- reduced provincial royalty rates and the elimination of PGRT;
- lower interest charges and operating costs;
- increased crude oil production and prices; and
- higher prices and volumes for petrochemical products.

Partly offsetting these positive factors were lower natural gas prices, higher sales and excise taxes on downstream operations, and higher current income taxes.

Table 1.
Overview of Total Operations in billion of dollars^(a)

	1986	1987	Change	%
Total Revenues	47.9	49.3	1.4	3
less:				
Operating Costs	9.3	9.0	-0.3	-3
Interest Expenses	2.8	2.3	-0.5	-18
Non-income Taxes and Royalties	6.7	7.1	0.4	7
Other Cash Expenses	20.5	20.0	-0.5	-3
Income Taxes				
Federal	0.9	1.4	0.5	45
Provincial	0.1	0.2	0.1	310
Internal Cash Flow	7.7	9.4	1.7	22
less:				
Write-offs ^(b)	6.8	5.6	-1.2	-17
Deferred Taxes	0.1	0.5	0.4	717
Net Income before Unusual Items	0.8	3.2	2.4	288
Unusual Gains	-3.5	0.2	3.7	-
Net Income	-2.7	3.4	6.1	-

Notes:

(a) Figures may not add due to rounding. See Appendix B1 for detail by operating segment.

(b) The components of 'write-offs' are non-cash charges and exploration and development expenditures charged to current operations.

Net Income by Sector

Net income for the petroleum industry in 1987 was \$3.4 billion, in sharp contrast to a loss of \$2.7 billion in 1986. The sharp decline in crude oil prices in 1986 required companies that employ the full cost method of reporting, predominantly Canadian-controlled companies, to book large asset write-downs in order to bring the book value of their oil and gas properties in line with the lower oil prices. Canadian-controlled companies, largely due to these write-offs reported a loss of \$3.5 billion in 1986, but increased their profits to \$1.1 billion in 1987 as write-down of assets were not again required. In contrast, foreign-controlled companies' net income, much less affected in 1986 by extraordinary write-offs, was up by \$1.5 billion (202%) to \$2.3 billion.

Canadian-controlled companies reported better results in all business segments except for downstream operations, with a \$110 million decrease in 1987 from a profit of \$370 million. Upstream activities, other Canadian operations and foreign activities showed profits of \$805 million vs. a loss of \$3.8 billion in 1986.

Largely as a result of lower prices, Canadian-controlled companies reported unusual losses of \$3.2 billion in 1986 – reflecting in part the reduced carrying value of Canadian frontier properties and foreign oil and gas assets – compared to gains of \$20 million in 1987. In addition, sizeable write-downs resulting from the "ceiling test" of the guideline⁽¹⁾, were not treated as extraordinary, but were reported mainly as depletion in 1986. Thus, in 1987 depletion was 27% (\$600 million) lower than in 1986. Cash flow, unaffected by the difference in write-offs between the two years, increased 31% to \$4.3 billion in 1987.

Net income for foreign-controlled companies more than tripled to \$2.3 billion in 1987. Extraordinary write-offs of over \$335 million in 1986, associated with the retirement of high cost debt and staff reductions, were in contrast to a gain of \$175 million in 1987. Net income prior to extraordinary items rose 95% in 1987. Foreign-controlled companies registered improvements in all business segments, but the greatest strength occurred in the upstream segment with gains of \$1.1 billion in net income. Cash flow for foreign-controlled companies rose 15% to \$5.1 billion.

⁽¹⁾ A description of the guideline is presented in Appendix E.

Table 2.
Net Income by Sector and Segment in billion of dollars

	1986	1987	Change	%
Canadian-Controlled Companies				
Upstream	- 2.2	0.6	2.8	-
Downstream	0.4	0.3	- 0.1	- 30
Other(a)	- 1.6	0.2	1.8	-
Total Canadian-Controlled	- 3.5	1.1	4.6	-
Foreign-Controlled Companies				
Upstream	0.4	1.6	1.2	275
Downstream	0.5	0.6	0.1	35
Other(a)	- 0.1	0.1	0.2	-
Total Foreign-Controlled	0.8	2.3	1.5	202
Total Industry	- 2.7	3.4	6.1	-

Note:

(a) Comprises net income generated by foreign activities and other Canadian operations. For more detail see Appendices A12 and B5-6.

Rates of Return⁽¹⁾

Return on Equity

The rate of return on shareholders' equity for the total Canadian petroleum industry was 9.1% in 1987 against a negative 7.1% in 1986 (i.e. for every dollar of equity the industry lost more than seven cents). The rise in profitability was due to the absence of large asset write-offs in 1987, the partial recovery in crude oil prices and to improvements in all business segments. Canadian-controlled companies had a 5.7% return on shareholders' equity compared with 12.6% for foreign-controlled companies. The average rate of return on equity for the five-year period ending in 1987 for the industry rose to 4.7% from an average of 4% ending in 1986 (Appendix A13).

Return On Capital Employed

The return on the capital employed by the Canadian petroleum industry in 1987 rose to 6.4% from a negative 0.9% in 1986. The return on capital employed averaged 4.5% in the five-year period ending 1987 vs. 4.4% in the period ending 1986. Upstream return on capital employed rose to 6.7% from a negative 0.8% in 1986, while the downstream return declined to 6.5% in 1987 from 6.9% in 1986.

Foreign-controlled companies realized an 8.4% return on capital employed for total operations in 1987, up from 3.7% in 1986. The upstream segment of this sector saw its return on capital employed grow from 2.9% to 9% in 1987.

The Canadian-controlled sector's rate of return on capital employed was 4.9% in 1987, up from a negative 3.8% in 1986. The rate of return on upstream capital employed was 5.1% vs. a negative 3.4% in 1986.

(1) Rate of return calculations are derived from data received directly from companies reporting to the PMA. Commentary on the comparability of these rates (Appendix A13) with those generated using Statistics Canada data (Appendix A14) can be found in Appendix D.

Table 3.
Rates of Return by Sector and Segment in percent

	Canadian-Controlled		Foreign-Controlled		Total Industry	
	1986	1987	1986	1987	1986	1987
Return on Equity						
Total Operations	-16.8	5.7	4.3	12.6	-7.1	9.1
Canadian Operations	-13.2	5.7	4.6	12.6	-4.8	9.2
Return on Capital Employed						
Total Operations	-3.8	4.9	3.7	8.4	-0.8	6.4
Canadian Operations	-2.2	5.0	3.9	8.5	0.3	6.5
Upstream Operations	-3.4	5.1	2.9	9.0	-0.8	6.7
Downstream Operations ^(a)	5.9	4.1	7.5	8.3	6.9	6.5

Note:

(a) Downstream, in this table, represents oil products operations only, i.e. it excludes petrochemical and other downstream operations.

Interest Coverage⁽¹⁾

The petroleum industry's financial health improved in 1987 as income before taxes, extraordinary items and expensed interest was 3.2 times total interest charges, both capitalized and expensed, up from the 1.6 times coverage in 1986. The marked gain in interest coverage was the result of improved upstream income combined with an 18% reduction in overall interest charges.

Net income before taxes and interest for Canadian-controlled companies in 1987 was \$3.2 billion – almost twice the level of \$1.7 billion recorded in 1986. Simultaneously, interest charges fell 24% from \$2.2 billion in 1986 to \$1.7 billion in 1987 as long-term debt was reduced either through repayment or as a result of the reorganization of corporate activities (non-petroleum long-term assets together with their corresponding liabilities were placed in non-reporting companies).

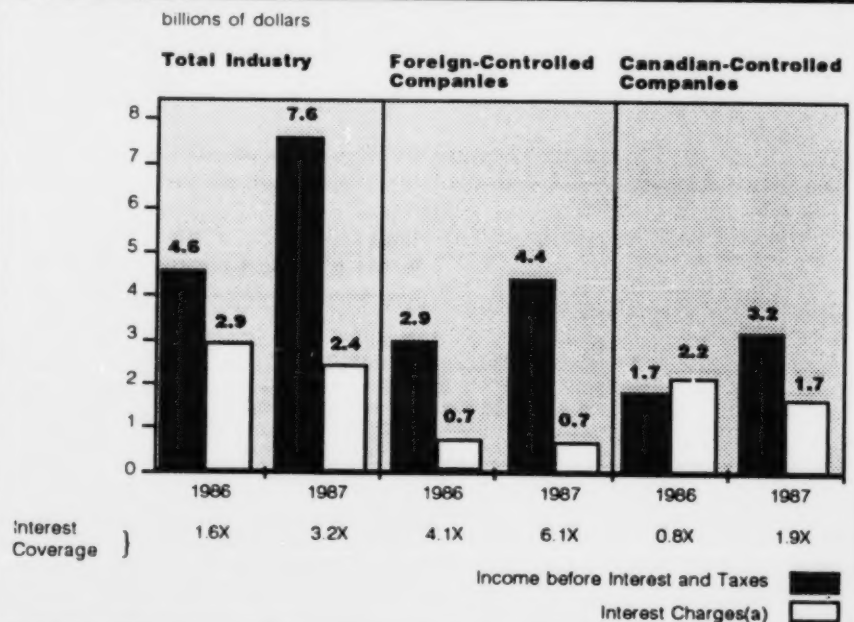
Thus the interest coverage for this sector more than doubled from 0.8 times in 1986 to 1.9 times in 1987. In 1986, net income before taxes and interest was not able to cover interest charges.

Foreign-controlled companies' interest coverage also improved from 4.1 times in 1986 to 6.1 times in 1987. The improvement resulted from a 53% rise in net income before tax and interest while interest charges rose only 2%.

(1) This analysis of interest coverage relates to total industry activity since there is neither consistency nor uniformity in the way companies allocate interest expenses among the various business segments – upstream, downstream, other Canadian and foreign.

Chart 1.

Comparison of Interest Charges with Income before Taxes



Note:

(a) Interest charges shown include both expensed and capitalized amounts. See Appendix A19 for more detail.

Net Income by Company Group

Integrateds and Refiners

A total of 14 companies grouped in the category 'integrateds and refiners' make up almost the entirety of the downstream segment in terms of revenues, and account for 33% of upstream operations.

Net income for the group rose

\$905 million to \$2 billion in 1987 due to a \$585 million (128%) increase in upstream earnings, a \$95 million improvement in the downstream segment and a turn around of \$225 million in 'other Canadian operations' and foreign activities.

Net results for 'other Canadian operations' changed by \$205 million, from a loss of \$120 million in 1986 to a profit of \$85 million in 1987. Extraordinary losses of \$180 million in 1986 related to corporate activities, in contrast to extraordinary gains of \$35 million in 1987, were responsible for the improvement in net income.

Oil and Gas Producers

The 115 'oil and gas producers' are active almost exclusively in upstream operations. The partial recovery of crude oil prices was sufficient to offset the decline in natural gas prices resulting in a 3% rise in gross upstream revenues - up from \$11.7 billion to \$12 billion in 1987 (Appendices B3-5). The extraordinary write-down of assets in 1986 that did not recur in 1987, the elimination of PGRT, lower royalty rates, reduced interest charges, lower operating costs and non-cash charges led to upstream profits of \$1.1 billion in 1987 from a loss of \$2.2 billion in 1986. Downstream net income for this group declined to \$45 million from \$85 million in 1986. In producers' other Canadian and foreign operations losses of \$695 million and \$930 million respectively were eliminated and a profit of \$210 million remained. Total net income was \$1.4 billion in 1987 vs. a loss of \$3.8 billion in 1986.

Table 4.

Net Income by Company Group in billions of dollars

	1986	1987	Change	%
Integrateds and Refiners				
Upstream	0.5	1.0	0.5	128
Downstream	0.8	0.9	0.1	12
Other(a)	-0.1	0.1	0.2	-
Total Integrateds and Refiners	1.1	2.0	0.9	83
Oil and Gas Producers				
Upstream	-2.2	1.1	3.3	-
Downstream	0.1	-	-0.1	-46
Other(a)	-1.6	0.2	1.8	-
Total Producers	-3.8	1.4	5.2	-
Total Industry	-2.7	3.4	6.1	-

Note:

(a) Comprises net income generated by foreign activities and other Canadian operations. For more detail see Appendices B1-4.

Upstream Segment

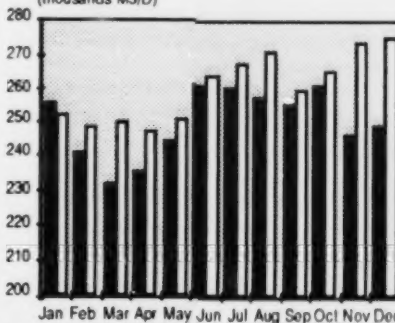
Revenues from upstream operations rose 4.9% to \$17.8 billion in 1987 over 1986. Increased crude oil production (up 5%) and the partial recovery of crude oil prices from the precipitous decline in 1986 resulted in higher crude oil revenues of \$2 billion in 1987. While production of marketable natural gas rose 8%, price declines forced natural gas revenues down \$880 million. Similarly, sulphur revenues were down \$260 million due to soft prices that more than offset higher sales volumes.

The average price received for conventional crude oil during 1987 was 19% higher than in 1986—\$136 per m³ vs. \$114 per m³. Prices for natural gas declined 25% in 1987 to an average of \$59 per 10³m³ from \$79 per 10³m³ in 1986. The average price of gas exported to the United States dropped by approximately 23%.

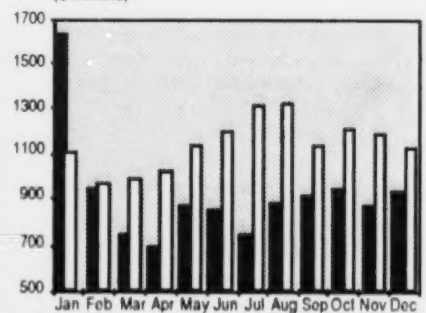
Chart 2.
Oil and Gas Production

Oil Production⁽¹⁾

(thousands M3/D)



(\$ millions)

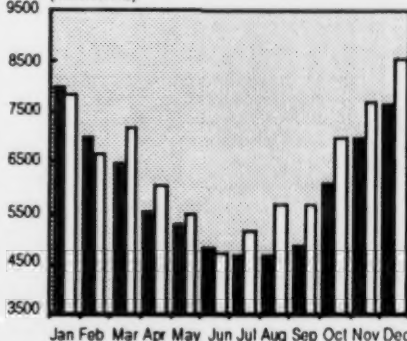


Source:
EMR Oil Branch

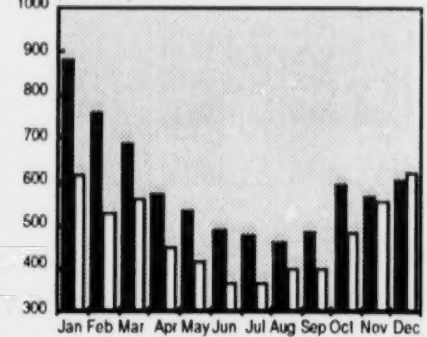
(1) Includes light, medium, heavy, experimental synthetic oil and condensates, but excludes pentanes plus.

Marketable Natural Gas Production

(millions M3)



(\$ millions)



Sources:
Canadian Natural Gas Focus
EMR - Natural Gas Branch

1986 ■
1987 □

Upstream results improved from a loss of \$1.8 billion in 1986 to a profit of \$2.2 billion in 1987. The turn around was, in part, the result of extraordinary gains of \$160 million in 1987 and the absence of large asset write downs which in 1986 amounted to \$2 billion. In addition, net income was favourably affected by higher crude oil prices, the elimination of PGRT (down \$450 million), lower royalties (down \$100 million), lower interest charges (down \$80 million), reduced operating costs (down \$115 million) and lower non-cash charges (down \$650 million). Partly offsetting these reductions were higher current and deferred taxes of \$360 million and \$335 million respectively. Total cash flow for the upstream segment rose 29% or \$1.5 billion to \$6.8 billion.

Canadian-controlled companies reported a \$2.8 billion improvement from a loss of \$2.2 billion in 1986 to a profit of \$615 million in 1987. Extraordinary asset write-downs of \$1.8 billion in 1986 reflected the impact of lower product values and the new CICA reporting guideline. In 1987, Canadian-controlled companies reported a gain of \$20 million and lower expenses in virtually every category except for current and deferred income taxes.

Foreign-controlled upstream profits rose \$1.1 billion to \$1.6 billion largely as a result of overall reduced expenditures and an extraordinary gain of \$140 million in 1987 vs. an unusual loss of \$125 million in 1986.

Table 5.
Upstream Financial Performance in billions of dollars

	1986	1987	Change	%
Total Revenues	17.0	17.8	0.8	5
less:				
Operating Costs	4.8	4.7	-0.1	-3
Interest	1.7	1.6	-0.1	-5
Royalties, Taxes	3.1	3.0	-0.1	-3
PGRT	0.5	-	-0.5	-
Other Expenses	5.8	4.9	-0.9	-16
Income Before Taxes	1.0	3.6	2.6	244
Current Taxes	0.8	1.1	0.3	46
Deferred Taxes	0.1	0.4	0.3	449
Net Income before Unusual Items	0.2	2.0	1.8	993
Unusual Gains	-2.0	0.2	2.2	-
Net Income	-1.8	2.2	4.0	-

Downstream Segment

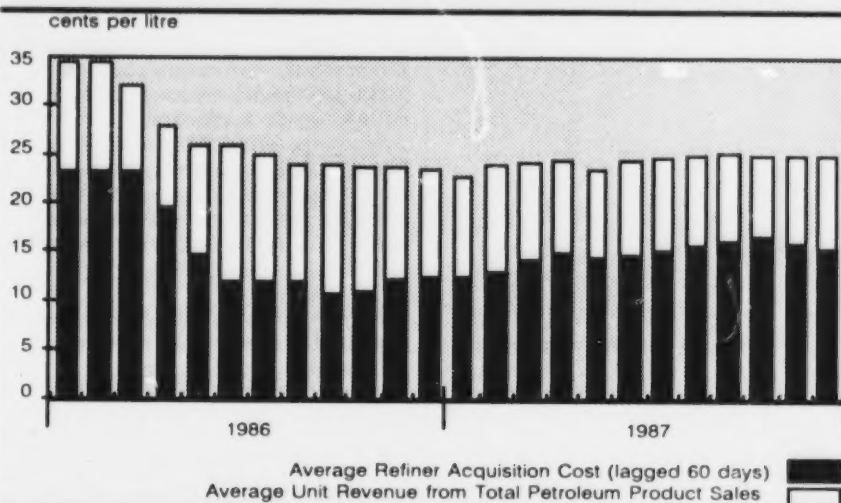
Refining and Marketing

Refining and marketing revenues increased 2% to \$24.2 billion as a result of

higher sales volumes and the flow through of higher federal sales and excise taxes, up 33% despite marginally lower feedstock costs. Cost of goods sold were down 3%.

Chart 3.

Canadian Crude Oil Acquisition Costs vs. Petroleum Product Prices



During 1987 the difference between average refined product price (excluding provincial sales tax) and average refiner acquisition costs of crude oil ranged from a low of 8.2¢ to a high of 11¢ per litre. The 1987 results were well below the 1986 range of 8.6¢ to 14¢ per litre.

Net income declined \$260 million or 28% in 1987 to \$665 million. The decrease was partly due to a gross profit margin slide of nearly 0.3¢ per litre below those experienced in 1986 which occurred despite an improvement in capacity utilization.

Table 6.

Gross Profit Margins: Refining and Marketing

	1986		1987		Change
	\$ millions	¢/litre	\$ millions	¢/litre	¢/litre
Gross Sales	23203	29.06	23731	28.63	- 0.42
Other Revenue	346	0.43	468	0.56	0.13
Total Revenue	23549	29.49	24200	29.20	- 0.29
less:					
Federal Sales and Excise Taxes	2969	3.72	3957	4.77	1.06
Cost of Goods Sold	15782	19.76	15474	18.67	- 1.09
Gross Profit Margins	4798	6.01	4768	5.75	- 0.25
less:					
Distribution, Selling and Administration Expenses	2911	3.65	3006	3.63	- 0.02
Cash Income before Interest and Current Taxes	1887	2.36	1762	2.13	- 0.24
Interest Expenses	94	0.12	72	0.09	-0.03
Current Income Taxes	370	0.46	384	0.46	0.00
Cash Income after Current Taxes	1422	1.78	1305	1.57	- 0.21

Also, gains from the sales of downstream assets in 1986, and reported as negative non-cash charges, overstated the then prevailing profitability. This resulted in an average return on capital employed of 6.5% vs. 6.9% return for 1986 (Appendix A13).

Cash flow for Refining and Marketing decreased 7% or \$100 million to \$1.3 billion in 1987, indicating in a more meaningful manner the decline in this business segment.

Gross profit margins, defined here as the difference between average sales revenue, direct taxes and cost of goods sold, decreased to 5.8¢ per litre in 1987 from 6¢ per litre in 1986. The decline was the result of strong price competition and the increase in federal sales and excise taxes.

Also, price regulation in some parts of the country had an adverse impact on the industry's profit margins.

Other Downstream Operations

Income for other downstream operations, mainly petrochemicals, rose sharply: from a loss of \$80 million in 1986 to a profit of \$235 million in 1987 largely the result of greater demand for products. In addition, extraordinary losses of \$170 million in 1986 that did not recur in 1987 affected the two year comparison. Internal cash flow increased 58% to \$425 million.

Total Downstream

The combined revenue of refining and marketing and other downstream operations increased 3% to \$27.4 billion. Net income rose 7% to \$900 million in 1987 from \$845 million in 1986 and cash flow increased 3% (\$60 million) to \$1.7 billion.

Other Canadian Operations

This business segment, which includes corporate income and expenses, recorded a profit of \$235 million in 1987 compared with a loss of \$815 million in 1986. The improvement was largely due to the non-recurrence of an extraordinary loss of \$775 million reported in 1986 and associated with the application of the CICA guideline, the redemption of high interest rate debentures and staff reduction programs. By comparison, an extraordinary gain of \$65 million was recorded for 1987. In addition, while interest charges fell by \$320 million in 1987, non-cash charges declined \$125 million. Cash flow, unaffected by write-offs and non-cash charges, rose from \$305 million in 1986 to \$355 million in 1987.

As noted in previous Monitoring Reports, many companies treat financing activities, and thus interest expense, as a corporate function – by definition included in 'other Canadian operations'. Although a larger number of companies now allocate interest charges to other segments, 23% of the industry's total interest expenses remained charged to this segment which accounts for only 6% of total industry revenues.

Foreign Operations

Net income on foreign operations rose from a loss of \$935 million in 1986 to a profit of \$75 million in 1987. Foreign activities of Canadian petroleum companies tend to be oil and gas production operations. Extraordinary losses of \$530 million in 1986 and larger than usual non-cash charges resulted from the application of the CICA guideline. By comparison, extraordinary losses of only \$35 million were taken in 1987. Cash flow, unaffected by write-offs, rose 10% to \$490 million.

2

Sources and Uses of Funds⁽¹⁾

Overview

Funds available to the petroleum industry prior to 'discretionary uses' declined \$1.3 billion or 15% to \$7.3 billion in 1987. The increase in internal cash flow of \$1.7 billion was more than offset by a decrease of \$2.9 billion in net external sources to a negative \$2 billion, i.e. the petroleum industry returned \$2 billion to other industries and individuals.

Redemptions of long-term debt exceeded new issues by \$3.6 billion compared with \$1 billion of net redemptions in 1986. In 1987, a number of companies reduced debt through reorganizations (debt, together with assets, was transferred to other industry segments and no longer included within the petroleum company

consolidation) and through the sale of assets, while in 1986 a number of companies paid off debt bearing higher than current interest rates. New equity, net of repurchases, of \$1.5 billion in 1987 compared with \$2 billion in 1986.

During 1987, net capital outlays were 3% higher at \$7 billion reflecting an increase in activity in the latter half of the year. Dividend payments fell from \$2.6 billion to \$1.5 billion. The excess of 'All Other Sources' over 'All Other Uses' resulted from the transfer of funds due to the reorganization of corporate activities and the sale of corporate assets. The net draw-down of working capital of \$2.4 billion in 1986 was in sharp contrast to the unchanged working capital position in 1987.

- (1) Sources and uses of funds for an individual company are reported to the PMA on a net basis. For example, a company raising and repaying debt would report only the net amount. Similarly, companies report only the net amount with regard to changes in equity and in working capital. For the industry as a whole, the PMA continues this process of netting the aggregates to show the industry's net draw of funds from, or net contribution of funds to, other sectors of the economy. However, to allow the reader to distinguish at the aggregate level between new long-term debt and repayment of debt, etc., these aggregates are shown separately in Table 8.

Table 7.
Sources and Uses of Funds (Net) in billions of dollars

	1986	1987	Change	%
Internal Sources				
Net Income before Unusual Items	0.8	3.2	2.4	303
Non-cash Items ^(a)	6.9	6.2	-0.7	-10
Internal Cash Flow	7.7	9.4	1.7	22
Net External Sources				
New Long-term Debt, Net of Repayments	-1.0	-3.6	-2.6	-
New Equity, Net of Repurchases	2.0	1.5	-0.5	-22
Net External Sources	0.9	-2.0	-2.9	-
Net Sources	8.6	7.3	-1.3	-15
Discretionary Uses				
Net Capital Expenditures	6.8	7.0	0.2	3
Dividend Payments	2.6	1.5	-1.1	-40
All Other Uses, Net of Other Sources	1.7	-1.2	-2.9	-
Net Uses	11.0	7.3	-3.7	-34
Net Working Capital Change	-2.4	-	2.4	-

Note:

- (a) Includes deferred taxes, exploration and development expenditures written-off against current income, and other non-cash items (depreciation, depletion and amortization) that do not require a financial outlay in the reporting period.

Sources and Uses of Funds (Gross)

In 1987, funds other than internal cash flow came from a variety of sources, and more than offset related uses. New long-term debt was down \$1 billion to \$875 million and repayment of debt rose 51% or \$1.5 billion to \$4.4 billion in 1987. New share issues declined \$565 million to \$1.8 billion, while equity reductions declined \$130 million to \$320 million. Reported individual increases to working capital totalled \$2 billion in 1987, up \$1.1 billion from \$920 million in 1986. Decreases in working capital amounted to \$2 billion in 1987 compared to \$3.3 billion in 1986. The increases in funds from 'all other sources' was partly due to the shifting of assets as a result of

reorganizations and the sale of oil and gas properties. The decrease in 'all other uses' are a reflection of the lower value of takeover activity in 1987 vs. 1986.

Net capital expenditures, the largest component of 'uses of funds', increased 3% (\$220 million) to \$7 billion (for further detail see Table 11).

Table 8.

Selected Categories of Sources and Uses of Funds in billions of dollars^(a)

	1986	1987	Change	%
New Long-term Debt ^(b)	1.9	0.9	- 1.0	- 54
Repayment of Long-term Debt ^(d)	2.9	4.4	1.5	51
Long-term Debt, Net of Repayments	- 1.0	- 3.5	- 2.5	-
New Equity ^(b)	2.4	1.8	- 0.6	- 23
Repurchase of Equity ^(d)	0.5	0.3	- 0.2	- 29
Net Equity, Net of Repurchases	2.0	1.5	- 0.5	- 22
Working Capital Increase ^(d)	0.9	2.0	1.1	121
Working Capital Decrease ^(b)	3.3	2.0	- 1.3	- 40
Net Working Capital Change	- 2.4	-	2.4	-
All Other Sources ^(c)	5.1	7.5	2.4	47
All Other Uses ^(e)	6.8	6.2	- 0.6	- 8
Other Uses Net of Other Sources	1.7	- 1.2	- 2.9	-
Total Capital Outlays	7.9	7.5	- 0.4	- 6
CEDIP, PIP and Other Incentives	1.1	0.5	- 0.6	- 57
Net Capital Expenditures	6.8	7.0	0.2	3

Notes:

- (a) Appendix B10 shows more detail.
- (b) Represents amounts of new long-term debt, new equity, or funds from drawing down working capital by those companies that reported deriving net funds from these sources.
- (c) Includes unusual gains; unusual losses are included in 'All Other Uses'.
- (d) Represents the net application of funds to repay long-term debt, repurchase equity, or to build up working capital by those companies that reported using funds for these purposes.
- (e) Mainly funds for acquisitions of plant and property from other corporations and for corporate takeovers.

Internal Cash Flow

Petroleum industry internal cash flow rose 22% or \$1.7 billion to \$9.4 billion in 1987 due primarily to higher crude oil prices, increased production, the elimination of PGRT, lower royalties, and a reduction in operating costs and interest charges. The upstream segment recorded an increase of 29% (\$1.5 billion) to \$6.8 billion in 1987. The cash flow from downstream operations rose 3% (\$60 million) to \$1.7 billion, largely as a result of improved prices and sales volumes in the petrochemical segment. Cash flow of 'other Canadian operations' increased 16% from \$305 million in 1986 to \$355 million in 1987, while that from foreign activities rose 10% to \$490 million.

Canadian-controlled companies' internal cash flow increased 31% to \$4.3 billion. Foreign-controlled firms' cash flow was up 15% to \$5.1 billion, with higher cash flow from upstream, downstream and foreign operations more than offsetting the lower results of the other Canadian operations segment.

Table 9.
Internal Cash Flow by Sector and Segment in billions of dollars^(a)

	1986	1987	Change	%
Canadian-Controlled Companies				
Upstream	2.2	3.1	0.9	43
Downstream	0.8	0.7	-0.1	-11
Other ^(b)	0.4	0.5	0.1	44
Total Canadian-Controlled	3.3	4.3	1.0	31
Foreign-Controlled Companies				
Upstream	3.1	3.7	0.6	19
Downstream	0.9	1.1	0.2	16
Other ^(b)	0.3	0.3	-	-16
Total Foreign-Controlled	4.4	5.1	0.7	15
Total Industry				
Upstream	5.3	6.8	1.5	29
Downstream	1.7	1.7	-	3
Other ^(b)	0.7	0.8	0.1	13
Grand Total	7.7	9.4	1.7	22

Notes:

(a) See Appendix B5-6 for more detail.

(b) Comprises internal cash flow generated by foreign activities and other Canadian operations.

Petroleum Incentives Program Grants

The Petroleum Incentives Program (PIP) was terminated on March 31, 1986 with the exception of commitments under existing agreements on Canada Lands. On March 25, 1987, the Government of Canada announced the establishment of the Canadian Exploration and Development Incentive Program (CEDIP) to provide direct assistance to the industry in respect of capital expenditures in the upstream segment.

Total grants were down from \$815 million in 1986 (entirely PIP grants) to \$265 million in 1987 (both PIP and CEDIP grants). Canadian-controlled companies received 82% of total grants in 1987, compared with 96% of the total in 1986.

Table 10.
PIP and CEDIP Incentives by Area and Sector in millions of dollars

	Canadian-Controlled		Foreign-Controlled		Total	
	1986	1987	1986	1987	1986	1987
Provinces	172	131	3	41	175	172
Canada Lands	613	87	27	6	640	93
Total Canada	785	218	30	47	815	265

Note:
Appendix A17 provides additional detail.

Capital Expenditures

Gross capital expenditures in 1987 decreased 6% or \$440 million to \$7.5 billion, as a 5% decline in domestic expenditures combined with a 13% drop in outlays abroad. Expenditures abroad as a share of total capital spending were unchanged at 7%. Upstream expenditures remained the largest component of total capital outlays, accounting for 73% in 1987 vs. 79% in 1986. All components of the upstream sector recorded decreases. Downstream and non-specified expenditures rose as did those of all other business segments.

Table 11.
Capital Expenditures in billions of dollars^(a)

	1986	1987	Change		Share of Total	
				%	1986 %	1987 %
Upstream						
Exploration	3.3	2.7	-0.6	-17	41	36
Development	1.0	1.0	-	-4	13	13
Production	1.4	1.2	-0.2	-8	17	16
Non-conventional ^(b)	0.6	0.5	-0.1	-9	8	7
Total Upstream^(c)	6.3	5.5	-0.8	-12	79	73
Downstream	0.8	1.2	0.4	47	10	16
Energy Mining	0.1	0.1	-	-50	1	1
All Other	0.2	0.3	0.1	49	2	4
Total Canadian	7.4	7.0	-0.4	-5	93	93
Expenditures Abroad	0.6	0.5	-0.1	-13	7	7
Total Expenditures	7.9	7.5	-0.4	-6	100	100
Incentive grants and other receipts	1.1	0.5	-0.6	-59		
Net Capital Expenditures	6.8	7.0	0.2	3		
Memo Items:						
Upstream Capital Expenditures						
(Net of incentive grants and other receipts)	5.2	5.0	-0.2	-2		
Flow-through Share Financing	0.1	0.1	-	40		

Notes:

- (a) More detail is presented in Appendix B12.
- (b) Includes oil sands and non-conventional heavy oil products.
- (c) Includes PIP and CEDIP grants, and other receipts.

Upstream: The modest recovery in world oil prices, the elimination of PGRT, and the introduction of new government drilling incentives were insufficient to raise upstream capital expenditures in the provinces above 1986 levels. In addition, expenditures on the Canada Lands were negatively affected by still relatively low oil prices and the termination of the Petroleum Incentives Program. Overall upstream outlays fell 12% (\$780 million) to \$5.5 billion in 1987 over 1986. Spending in all categories of upstream activity declined.

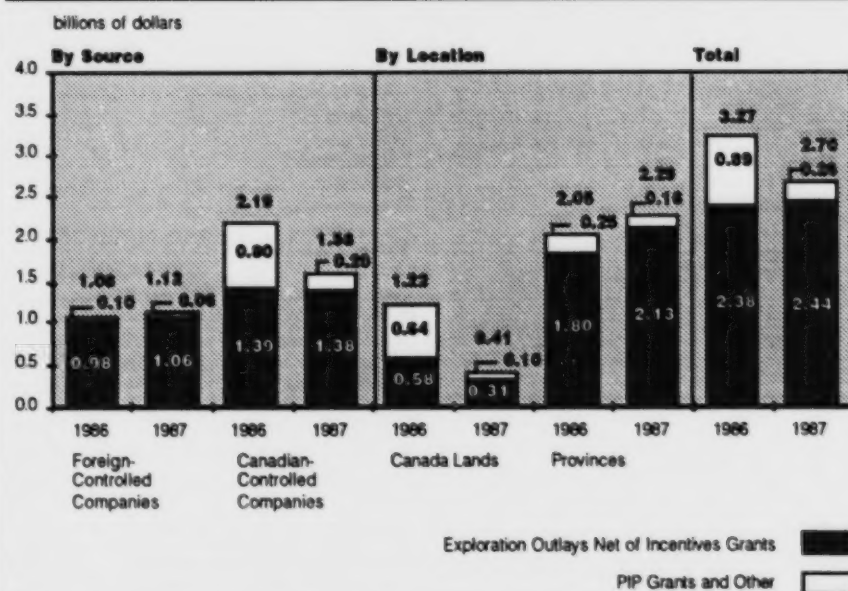
Net of incentive grants, upstream outlays by Canadian-controlled companies decreased 5%, while that for foreign-controlled companies rose 1%. As a result, the Canadian-controlled group of companies' share of capital spending fell 1.4 percentage points to 50.2% of the total (Appendix B11).

Exploration expenditures rose 12% to \$2.3 billion in the provinces, but decreased 66% to \$410 million on Canada Lands. This produced a decrease of 18% in total exploration spending to \$2.7 billion. Expenditures on Canada Lands accounted for 15% of the total vs. 37% for 1986, with all areas of Canada Lands experiencing lower spending.

Exploration outlays by foreign-controlled companies were 4% higher in 1987, while Canadian-controlled firms reported lower expenditures (down 28%) largely as a result of a withdrawal from Canada Lands. Canadian-controlled companies accounted for 58% of total exploration spending and 84% of frontier activity.

In 1987, proceeds from flow-through share financing earmarked for exploration activity were \$115 million, up 40% from \$80 million in 1986.

Chart 4.
Exploration Expenditures in Canada



Downstream Expenditures: Downstream outlays rose 47% to \$1.2 billion in 1987 due to the expansion and upgrading of refineries and spending on a heavy oil upgrader. Increased expenditures on refineries, pipelines and marketing outlets more than offset declines in spending on petrochemical plants.

Energy Mining and All Other: Expenditures were lower in energy mining, but higher in all other areas including those for mining facilities, drilling ships, caissons, and drilling rigs. This category of capital outlays also includes capitalized interest charges related to pre-start-up project expenditures.

Reinvestment Rates

Considering the dramatic changes that occurred in 1986 and 1987, the two years are not easily compared. The overall reinvestment rate for the petroleum industry – i.e. total net capital expenditures⁽¹⁾ as a percentage of internal cash flow from all business segments was 75%, down from 88% in 1986.

In view of the significant retrenchment in the industry in 1986, companies were unable to promptly take advantage of better than expected cash flow during the early months of 1987. The sharp decline in crude oil prices in 1986 had not only caused reinvestment plans to be cut severely but also brought about a reduction in the industry's physical and human resources.

Nevertheless, as prices strengthened and generally stabilized during 1987 capital spending developed in accordance with company plans as set out in the fall of 1986, following the elimination of the PGRT. While the reinvestment rate in the first half of 1987 bottomed out at 59% of cash flow, it rose to 90% during the last

six months, or to 75% for the year, reflecting also improved drilling incentives.

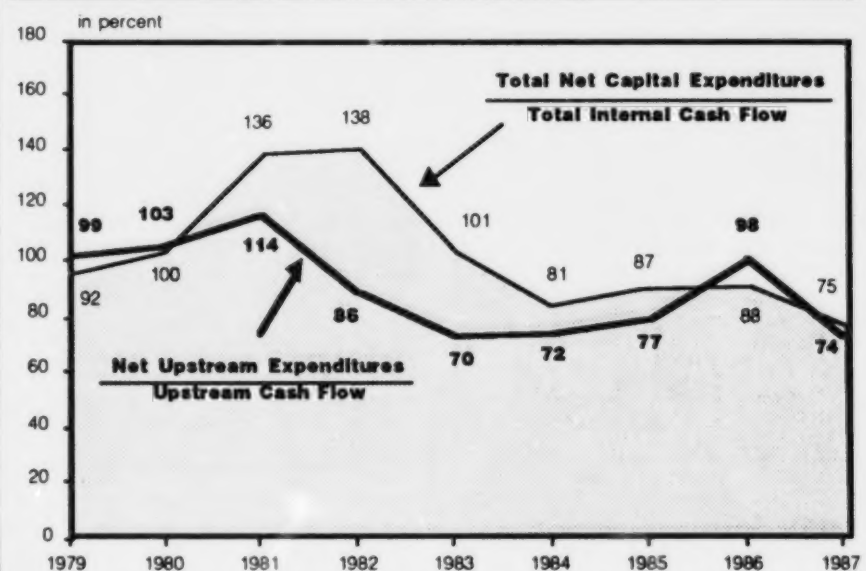
High cost activities such as Canada Lands expenditures and mega projects were deferred in light of low price expectations and as a result of the elimination of the Petroleum Incentives Program. Total 1987 capital spending was also constrained by the financial difficulties of several companies.

Both control groups reported overall declines in reinvestment rates. Canadian-controlled companies total reinvestment rate fell from 110% in 1986 to 87% in 1987, while that for foreign-controlled companies declined from 72% to 65%. A comparison of the two groups in terms of upstream activities gives similar results, with Canadian-controlled companies reinvesting 81% of upstream cash flow (down 42 percentage points) vs. 68% for foreign-controlled firms (down 13 percentage points).

Upstream capital expenditures (net of incentive grants) though down 24 percentage points from 1986 accounted for 74% of industry upstream cash flow. Upstream cash flow rose 29%, while net upstream capital expenditures decreased 2%.

(1) Net capital expenditures is defined as capital expenditures less incentive grants and insurance receipts.

Chart 5.
Reinvestment Rates



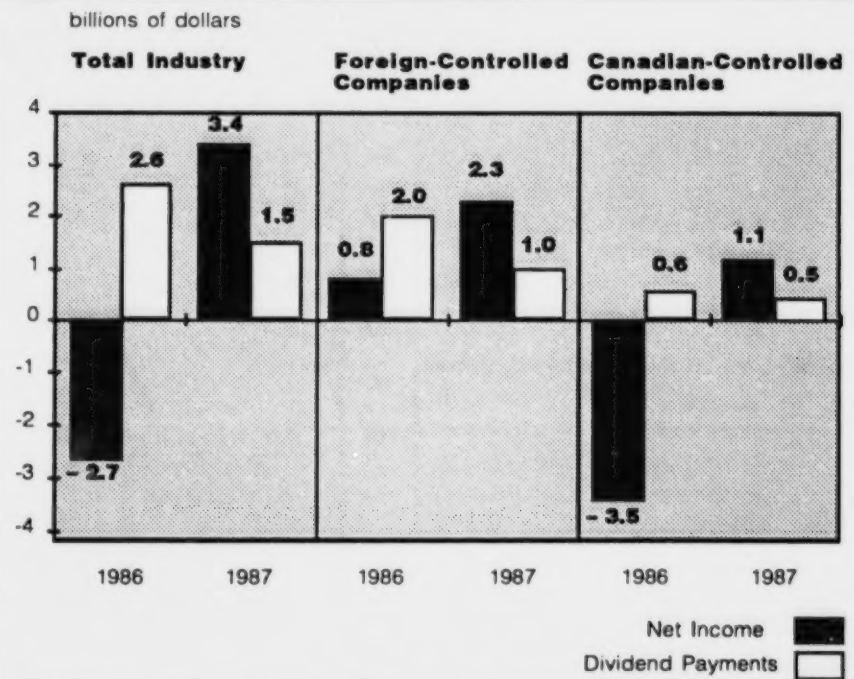
Dividend Payments

Dividend payments by the petroleum industry declined 40% to \$1.5 billion in 1987, while net income recovered from a loss of \$2.7 billion to a profit of \$3.4 billion. In 1986 higher dividends were paid by a number of foreign-controlled companies who had either not paid dividends in previous years or used dividend payments in conjunction with financial restructuring. These payments did not recur in 1987.

Dividends paid by Canadian-controlled companies decreased 17% to \$495 million for a payout rate of 47% in 1987, while dividend payments by foreign-controlled companies fell 47% to \$1 billion, a payout of 45%.

Chart 6.

Dividend Payments Compared with Net Income



3

Comparative Performance: Petroleum and Other Industries

Net Income Comparison

The petroleum sector's financial performance can be put into perspective by comparing it to other sectors of the economy using data from Statistics Canada.⁽¹⁾

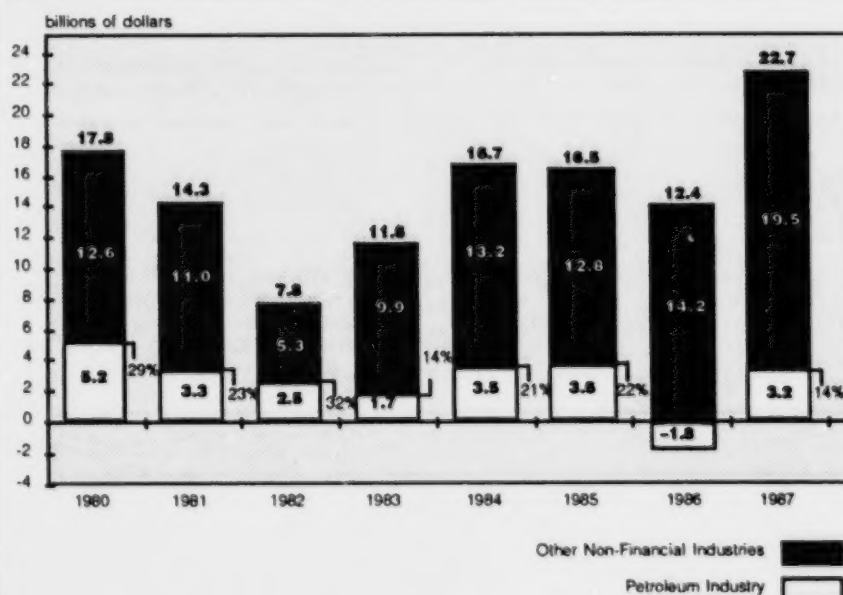
Exclusive of Crown corporations, the petroleum industry's net income on Canadian operations after extraordinary items increased from a loss of \$1.8 billion in 1986 to a profit of \$3.2 billion in 1987. The 1987 result was still below levels achieved in 1984 and 1985 and \$2 billion less than the profit achieved in 1980.

By comparison, net income for all other non-financial industries rose 37% to a record high. Chart 7 shows that the petroleum industry's net income for 1987 represented 14% of all non-financial industries' net income. Although this compares very favourably against the particularly poor results in 1986, it is still well below the level of prior years (1983 excepted).

Return on shareholders' equity for the petroleum industry of 9.7% after extraordinary items compares with 12.1% for all other non-financial industries. In addition, the five-year average ending in 1987 for the petroleum industry was 5.8% compared with 10.2% for the other industries. The rate of return on capital employed for the petroleum industry was 6.8% vs. 8.9% for all other non-financial industries (Appendix A14).

(1) The data given in this section of the report are not precisely comparable with those presented elsewhere although they are close to results based on the PMA survey which are reported in Chapters 1 and 2. Petroleum industry data from Statistics Canada, while covering a greater number of companies than the PMA survey, exclude government business enterprises as well as the foreign activities of companies originating in Canada. The PMA survey covers the global activities of petroleum companies operating in Canada, including Crown corporations, subject to a minimum size in terms of assets and revenues.

Chart 7.
Comparison of Net Income - Petroleum Industry vs. All Other Non-Financial Industries



Capital Expenditures

Based on Statistics Canada data, petroleum industry gross capital expenditures (i.e. before deducting incentive grants) increased 5% in 1987 from 1986. Capital expenditures of other non-financial industries increased 10%, largely as a result of greater strength in the mining sector and to a lesser degree in the 'other non-financial' sector. Accordingly, the capital expenditures of the petroleum industry as a proportion of total capital expenditures of all non-financial industries decreased by one percentage point to 18% in 1987.

Table 12.

Comparison of Capital Expenditures - Petroleum Industry vs. All Other Non-Financial Industries in billions of dollars

	1986	1987	Change	%
1. Manufacturing	10.5	10.9	0.4	4
2. Mining	2.1	2.9	0.8	39
3. Other Non-Financial	15.6	17.2	1.6	11
4. Total Non-Financial excluding Petroleum	28.2	31.0	2.8	10
5. Petroleum	6.5	6.8	0.3	5
6. Total Non-Financial including Petroleum	34.6	37.8	3.2	9
7. Line 5 as a % of line 6	19	18		

Source:

Statistics Canada, 61-003, *Industrial Corporations - Financial Statistics*. This survey does not include government enterprises. Expenditures are gross, including capital grants.

4

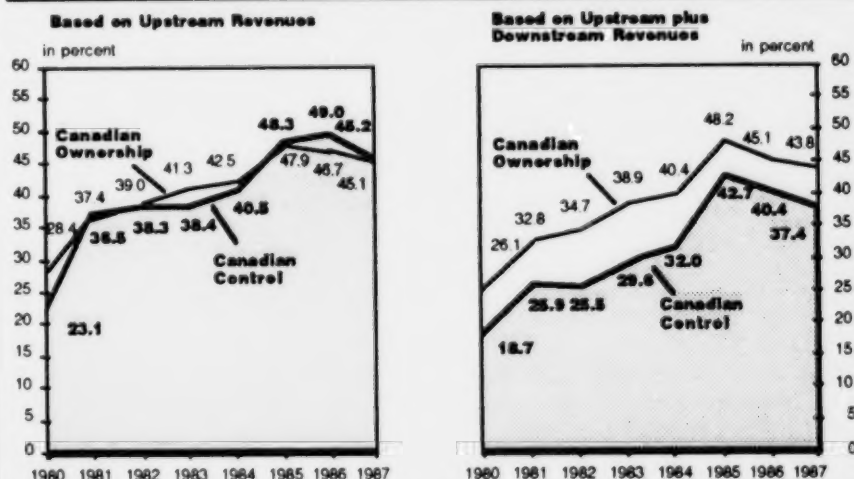
Ownership and Control Trends

A considerable amount of restructuring occurred in the petroleum industry in 1987 through mergers and acquisitions as reported under 'New and Notable'. A number of petroleum companies have been purchased by other firms, in whole or in part, leading to changes in the level of Canadian ownership and control of the industry in 1987. In addition, some Canadian-controlled companies sold assets in an effort to reduce their levels of indebtedness.

As a result, Canadian ownership of upstream revenues declined from 46.7% in 1986 to 45.1% in 1987, and Canadian control decreased from 49% to 45.2% in 1987.

The reduction in Canadian ownership and control was largely the result of takeover activity and of significant differences in revenue growth for the two sectors. While revenues for the foreign-controlled sector grew at 8% those for Canadian-controlled companies rose by only 1%, thereby, having a downward effect on the Canadian control percentages.

Chart 8.
Canadian Ownership and Control of the Petroleum Industry



The planned takeover of Dome Petroleum by Amoco Canada, the partial purchase of Bow Valley Industries by British Gas, and the proposed takeover of Canterra Energy by Husky Oil, if completed, will have the following comparative effects in 1988, based on 1987 revenues, on the level of Canadian ownership and control:

	1987	Proforma July 1988
Upstream Revenues		
Canadian Ownership	45.1	41.7
Canadian Control	45.2	35.8

Canadian ownership of upstream plus downstream revenues declined 1.3 percentage points to 43.8% in 1987, while Canadian control fell 3 percentage points to 37.4%.

Takeover activity was instrumental in increasing the level of foreign control in the 'other foreign' category. The increase in United States ownership and control is the outcome of both takeover activity and the strongly unproportional growth in upstream revenues in 1987. In addition, Canadian ownership and control declined in all categories of measurement with the largest decline occurring in Canadian control of exploration spending which dropped to 54.5% in 1987 from 67.2% in 1986 (Appendix A21).

Table 13.
Ownership and Control by Country and Sector in percent^(a)

	Ownership		Control	
	1986	1987	1986	1987
United States	39.5	40.6	42.2	44.0
Other Foreign	15.4	15.6	17.4	18.6
Total Foreign	54.9	56.2	59.6	62.6
Canadian Public Sector	16.0	15.9	15.7	15.5
Canadian Private Sector	29.1	27.9	24.7	21.9
Total Canadian	45.1	43.8	40.4	37.4

Note:

(a) Based on upstream plus downstream ('petroleum-related') revenues using ownership data as at year-end 1987.

5

Research and Development Activities: 1987 vs. 1986

A total of 25 PMA companies, mostly larger firms, reported R&D expenditures in 1987, compared to 28 in 1986. In total, these companies spent \$231 million on R&D activities in 1987, down 5% from 1986.⁽¹⁾ During 1987, 'in-house' R&D expenditures fell by 14%, while contract work performed by others grew to \$88 million or by 14% overall largely as a result of a 26% increase in payments for R&D conducted abroad.

'In-house' Expenditures

Petroleum industry 'in-house' R&D expenditures in 1987 were down from \$167 million in 1986 to \$143 million in 1987. Expenditures of a current nature decreased to \$123 million or by 16%, of which the wages and salaries component declined 21% to \$55 million. The balance (\$20 million) of total 'in-house' expenditures after current expenses was spent on capital goods, primarily R&D equipment. Capital expenditures increased marginally over 1986 levels.

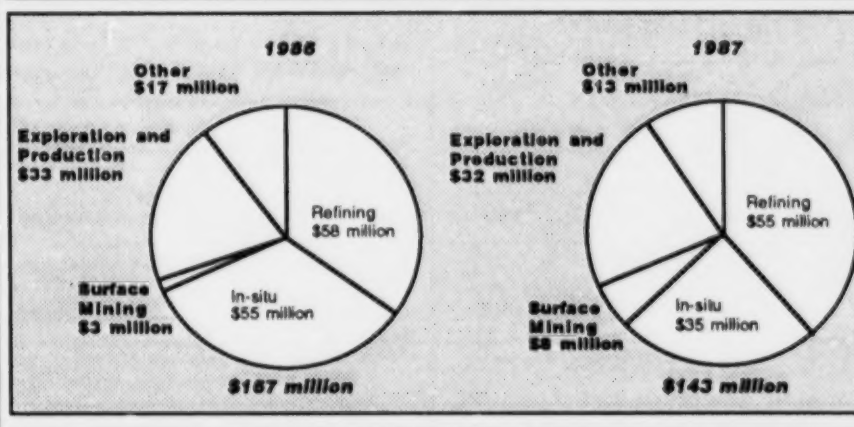
Refinery technology R&D remained the largest single component of 'in-house' expenditures at 38% decreasing in absolute terms by \$4 million to \$55 million. The second largest component of 'in-house' R&D expenditures in 1987, in-situ recovery of heavy oil, declined \$20 million to \$35 million.

Conventional crude oil and natural gas exploration and production R&D expenditures, dropped slightly to \$32 million (\$33 million in 1986) but increased by 2 percentage points to 22% of all 'in-house' R&D expenditures in 1987. In a time of retrenchment after the abrupt price decline of 1986, non-energy related R&D expenditures declined markedly in 1987. Energy technology R&D other than that related to fossil fuels grew from \$4 million or 2% of total 'in-house' R&D expenditures by major oil and gas enterprises to \$10 million or 7% of such expenditures in 1987 (Appendix A22).

⁽¹⁾ Data are drawn from responses to two Statistics Canada questionnaires, *Research and Development in Canadian Industry* and *Energy R&D Expenditures by Area of Technology*, made available to the PMA under an agreement pursuant to the Statistics Act. There may be a small element of 'double counting' as the reported amount of 'in-house' R&D may include contract work performed for other petroleum companies.

Chart 9.

'In-house' R&D Expenditures by Activity



Total R&D personnel employed by the surveyed companies decreased from 1254 persons in 1986 to 1112 persons. The percentage of scientists, engineers and senior R&D administrators grew by 1 percentage point to 43% of all employees engaged in R&D as cuts were largely among support staff.

'In-house' R&D expenditures by the petroleum industry during 1986⁽¹⁾ were equal to 0.6% of sales, while the average for all other non-financial industries was 1.8%.

Reporting companies provided 88% of the funds allocated to 'in-house' activity. The remainder was obtained from federal and provincial government grants, contract work performed for other companies, and from allocations by parent and affiliated companies to Canadian subsidiaries.

The bulk of 'in-house' R&D activity in Canada was conducted in Alberta and Ontario (58% and 41%, respectively, of total outlays in 1987). R&D performed in Alberta during 1987 accounted for 41% of R&D personnel employment, while Ontario accounted for 55%.

Contract Expenditures

Energy and non-energy related contract R&D expenditures by PMA reporting companies totalled \$88 million in 1987, up 14% from 1986. Research performed abroad on behalf of Canadian petroleum companies accounted for 82% of total contract R&D expenditure, an increase of 7 percentage points over 1986 and 31 percentage points over 1985.

(1) Comparable information for 1987 will not be available until 1988.

Table 14.

Contract R&D Spending in Canada and Abroad in millions of dollars

Recipient	In-Canada		Abroad		Total	
	1986	1987	1986	1987	1986	1987
Parent and Affiliate Companies	13	12	55 ^(a)	73 ^(a)	68	85
Other Corporations	3	2	2	—	5	2
Research Institutions	4	1	1	—	5	1
Totals	20	15	58	73	78	88

Note:

(a) Amounts of \$27 million and \$37 million represented outlays on energy-related technologies in 1986 and 1987 respectively. No breakdown is available between energy components for contract activities in Canada.

6

Five-Year Operating Summary: 1983 - 1987

Information drawn from five years of petroleum monitoring surveys provides a basis for comparing a number of financial performance characteristics of the oil and gas industry over the period 1983-87. To provide users of this report with some additional perspective, Table 15 presents aggregate data for 128 companies reporting to the Petroleum Monitoring Agency, for which consistent statistics are available over the five years. Detailed operating data for this aggregation, representing practically 100% of the PMA's 1987 data base in terms of revenues, are shown in Appendices B17-18.

Table 15.
Five-Year Operating Summary: 1983-1987 in billions of dollars

	1983	1984	1985	1986	1987
Revenues					
Total Operations ^(a)	59.1	63.2	67.0	47.9	49.2
Upstream	23.8	26.5	28.0	16.9	17.7
Downstream	30.7	31.9	34.1	26.5	27.4
Net Income					
Total Operations ^(a)	1.5	3.7	2.9	-2.7	3.4
Upstream	2.5	3.1	2.9	-1.8	2.2
Downstream	-0.1	0.4	0.2	0.8	0.9
Internal Cash Flow					
Total Operations ^(a)	8.6	10.6	11.6	7.7	9.3
Upstream	7.3	8.4	9.5	5.2	6.7
Downstream	0.8	1.1	1.1	1.7	1.7
Capital Expenditures					
Upstream	6.8	8.0	9.3	6.2	5.3
Downstream	1.6	0.9	0.8	0.7	1.1
Other	1.2	0.9	0.9	0.4	0.4
Total in Canada	9.6	9.8	10.9	7.3	6.9
Expenditures Abroad	0.8	0.7	1.2	0.6	0.5
Total Capital Outlays	10.4	10.5	12.1	7.9	7.4
Dividend Payments	1.3	1.3	1.8	2.6	1.5
Total Reinvestment Rates^(b)	100.7	80.7	87.2	88.0	73.8
Upstream Reinvestment Rates^(a)	70.0	72.0	76.9	97.6	72.7
GNE Deflator	100.0	103.3	106.6	109.8	114.8

Notes:

(a) Includes 'other Canadian' and foreign operations.

(b) For definitions, see notes a and b, Appendix A15.

Noteworthy Trends

A long run comparison of the financial performance of the petroleum industry provides a truer picture of the industry's overall strengths and weaknesses. The major trends over the past five years are discussed briefly below.

1. *Revenues fell by 17% to \$49 billion from 1983 to 1987* – representing an average annual rate of decline of approximately 4.3% over the five-year period. Total revenues for the industry overall are largely a function of crude oil prices or, more broadly, the revenues associated with the upstream segment. Thus, as crude oil prices rose after the oil shock of 1979, so did industry revenues which continued to increase to a peak in 1985. However, the sudden decline in crude oil prices commencing at the beginning of 1986 brought overall industry revenues down by about 30% from the 1985 high. The modest improvement in crude oil prices in 1987 provided an equally modest growth in revenues – 3% over 1986, the five-year low.

By far the largest component of downstream revenues – between 65% and 80% – is the flow-through of petroleum feedstock in the form of costs of goods sold to the refining and marketing elements. Thus, changes in downstream revenues paralleled those of the upstream segment. Revenues in 'other Canadian' and 'foreign' operations fell as a result of the sale of assets and reorganizations.

2. The profitability of the petroleum industry is significantly influenced by current and expected prices for oil and gas which in turn drive changes to royalty rates, energy taxes, productivity and the application of accounting practices. The abrupt decline in crude oil prices led to a write-down of assets in 1986 amounting to \$3.5 billion creating a loss of \$2.7 billion. The industry improved overall productivity by reducing operating costs and increased production which together with a modest improvement in crude oil prices resulted in an increase in net income to \$3.4 billion in 1987, the equivalent of 6.9% of total revenues.

Upstream profits, which reached a high of 12.3% of upstream revenues in 1987, was 0.6 percentage points better than the previous high in 1984 of 11.7%. The improvement was largely attributable

to the elimination of PGRT, and the reduction of royalty rates, operating costs and interest charges.

3. *Internal cash flow increased as a percentage of revenue* – to a high of 18.9% in 1987 from 17.3% in 1985, the previous high. Upstream internal cash flow amounted to 38% of 1987 revenues vs. 34% in 1985. Downstream cash flow increased 3% in 1987 to a five-year high of \$1.7 billion or 6.3% of related revenues.

4. The crude oil price decline at the beginning of 1986 resulted in a marked reduction in capital expenditures which continued into 1987. While crude oil prices improved in 1987 over 1986, they were still well below prices registered in 1985 – the year representing a five-year peak in capital expenditure activity. Upstream capital expenditures, at their highest level of \$9.3 billion in 1985, dropped to their lowest point of \$5.3 billion in 1987.

5. *The reinvestment rate for 1987 at 74% was the lowest level in five years* largely as a result of the steep decline in crude oil prices in 1986 that curtailed expenditures quite severely. In 1987, prices recovered slightly providing growth in cash flow without a comparable increase in capital outlays due to the financial difficulty of some companies.

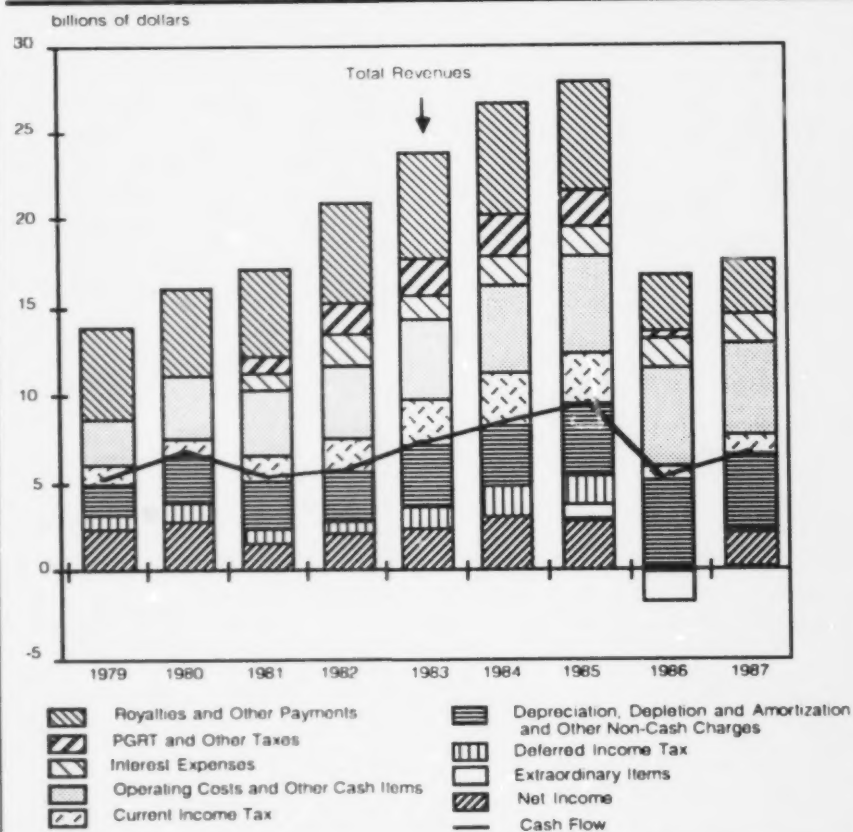
6. *Dividends rose steadily between 1983 and 1985*, climbed sharply in 1986 to \$2.6 billion, and then settled back in 1987 to \$1.5 billion.

Retrospective: Upstream Operations

A nine-year retrospective on the petroleum industry illustrates the impact of the oil shock of 1979, energy taxes and the steep price decline of 1986 which saw prices fall close to the 1979 level. Revenues rose steadily as a result of higher crude oil and gas prices which peaked in 1985 prior to the marked reduction in 1986. However, net income was virtually unaffected by higher revenues. New energy taxes and higher royalty rates reduced the ability of companies to participate in rising petroleum prices, first by the tax itself and secondly through the inability to deduct the cost in determining current taxes which resulted in higher income taxes. In addition, the Canadian-controlled component of the industry amassed considerable debt following takeover activity. This resulted in higher interest charges and lower net income and cash flow.

The decline in oil prices in 1986 led to large asset write-downs that caused the industry to record losses despite the elimination of PGRT and the reduction of royalty rates. Large asset write-offs, mainly of frontier properties, both as extraordinary and as part of depletion, were also taken in 1983 and 1985. However, with lower energy taxes, improvements in operating efficiency and lower current taxes, the industry's net income and cash flow moved to higher levels in 1987.

Chart 10.
Upstream Income Data: 1979 - 1987



Note:
Interest expenses are included with operating costs in 1979 and 1980.

Appendices

Appendix A Supplementary Data

A1 Year in Review

1987

Feb 15

The Canada Petroleum Resources Act, proclaimed in force on this date, provides for a coordinated approach between the Government of Canada and the provincial and territorial governments for the management of oil and gas resources in Canada's frontier lands.

Mar 25

The Government of Canada announced the Canadian Exploration and Development Incentive Program (CEDIP), designed to provide up to \$350 million per year in direct assistance to the petroleum industry.

Apr 4

The Canada-Newfoundland Atlantic Accord Implementation Act, proclaimed in force on this date, provides for joint management of offshore oil and gas development and incorporates the provisions of the Canada Petroleum Resources Act.

Apr 13

The Minister of Energy, Mines and Resources announced a conference process entitled "Energy Options - A Canadian Dialogue" to review and assess Canada's energy prospects and options over the longer term.

May 28

The Petroleum Monitoring Agency released a report concluding that additional industry cash flow resulting from early removal of the Petroleum and Gas Revenue Tax will be used as intended to increase capital expenditures and maintain employment, rather than to raise dividends or other payouts to shareholders.

Jun 1

Alberta implemented, on a trial basis, its Modified Proration Plan, effectively giving provincial oil producers unrestricted access to markets. In November, the Energy Resources Conservation Board announced that the Plan was to be continued.

Jun 18

The Minister of Finance tabled a white paper on tax reform. Under the proposals, the petroleum industry's average tax rate would fall slightly due to lower corporate tax rates despite the elimination of the earned depletion deduction on oil sands and enhanced recovery projects. The Canada Exploration and Development Incentive Program is to be phased out by 1989.

Jun 24

The Minister of EMR directed the Chairman of the National Energy Board to provide information on whether the Canadian government's criterion (expressed in the October 1985 federal-provincial Agreement on Natural Gas Markets and Prices) that the price of exported natural gas must recover its appropriate share of the costs incurred was being met. This directive was issued in light of the U.S. Federal Energy Regulatory Commission's decision which appeared to disallow recovery in U.S. importers' demand charges of the full Canadian pipeline tolls associated with export sales.

Aug 24

A federal-provincial-territorial conference of ministers of energy was held in St. John's, Newfoundland to discuss energy security, including in that regard the future of Canada's crude oil pipeline system.

Aug 27

The Minister of EMR released the first report on the relative performance of export and domestic prices measuring adherence to the criterion of the October 1985 Agreement on Natural Gas Markets and Prices that the price of exported natural gas shall not be less than the price charged to Canadians for similar types of service in the area adjacent to the export point. The report concluded that in general Canadian consumers were, during the period November 1986 to April 1987, paying less than the price charged on export sales. British Columbia's average gas export prices, due to sales into the highly competitive U.S. Pacific Northwest energy market and the need for the province's producers to retain a share of that market, were determined to be slightly less than the average domestic price for comparable sales.

A1
(continued)

Sep

The National Energy Board announced a new market-based procedure that allows market forces to determine volumes and terms of natural gas exports in lieu of the surplus reserve test formerly used.

Oct 4

Canada and the United States agreed in principle on the elements to be included in the Canada-U.S. Free Trade Agreement. The legal text of the Agreement was tabled in the House of Commons on December 11, 1987.

1988

Jan 26

The Minister of EMR released a study entitled *Canada-U.S. Free Trade Agreement. An Assessment* which foresaw the major longer run macroeconomic effects on our energy sector to more secure access to the U.S. market for Canadian energy exporters, increased availability of capital for investment in Canadian energy industries, and facilitation of major energy project development to the benefit of domestic energy security.

Jan 28

The Committee responsible for organizing the 14th congress of the *World Energy Conference* which will be held in Montreal from September 11-23, 1989 was granted \$1 million by the Government of Canada.

Mar

The second issue of the *Natural Gas Monitoring Report* concluded that domestic and export prices received by Alberta's producers converged during the first eleven months of the period November 1986 to October 1987 as both domestic and export prices for long term sales declined. British Columbia's producers received stable domestic gas sales' prices which were marginally higher in the second half of the period. B.C. gas export prices in the long term and interruptible categories exceeded domestic prices and, in total for the year, domestic prices were less than export prices.

Apr 13

The Geological Survey of Canada's Institute of Sedimentary and Petroleum Geology, published by a branch of EMR, under the title *Conventional Oil Resources of Western Canada (Light and Medium)*, estimates that an additional 570 million cubic metres of light and medium crude oil potentially could be discovered in Canada's Western Sedimentary Basin and concluded that a high proportion might be economically recoverable.

May 3

The Minister of EMR announced the *Canadian Exploration Incentive Program* (CEIP), an initiative within the framework of the flow-through shares plan. The Program will go into effect on October 1, 1988 for oil and gas exploration and continue until it is reviewed (renewal is possible) on December 31, 1990. It will pay over \$210 million per year in total to the mining, and oil and gas industries, and is targeted to ease the financing of junior exploration companies. Eligible companies will be able to claim 30% of their exploration expenses up to a maximum of \$10 million.

A2 Petroleum Supply and Demand Summary^{(a)(b)}

	1986	1987	Change
	thousands m ³ /day		%
Production			
Crude Oil	250	261	4
Natural Gas Liquids ^(c)	36	41	14
Total Production	286	302	5
Net Exports^(d)			
Crude Oil	37	37	-
Natural Gas Liquids	12	13	6
Refined Products	5	5	2
Total Net Exports	54	55	1
Consumption			
Natural Gas Liquids	29	33	16
Refined Products	226	231	2
Total Consumption	255	264	4

Notes:

- (a) Petroleum includes conventional and synthetic crude oil and natural gas liquids (propane, butane and ethane) derived from gas plants and gas reprocessing plants. Data on the production, net exports and consumption do not represent a complete supply/demand balance as industry's own use and stock changes are not shown.
- (b) Figures represent total industry activity and are derived from a number of sources:
 Production - Statistics Canada (Catalogue 26-006)
 Net Exports - EMR Oil Supply Branch
 Consumption - Statistics Canada (Catalogue 45-004)
- (c) Does not include refinery production of 8.4 thousand m³/d in 1987 and 7.8 thousand m³/d in 1986.
- (d) On a gross basis, petroleum imports (including exchange receipts) for 1986 and 1987 were 56,400 m³/d and 64,300 m³/d (354,900 b/d and 404,600 b/d) respectively, or 22% and 24% of domestic consumption in those periods.

A3 Natural Gas Supply and Demand Summary^(a)

	1986	1987	Change
	millions m ³ /day		%
Production			
Gross New Production	295	316	7
Less:			
Injected, Shrinkage and Adjustments	69	74	7
Indigenous Supply	226	242	7
Less:			
Producer Consumption	28	29	1
Marketable Production	198	213	8
Net Exports	57	76	34
Consumption^(b)			
Energy Use	124	123	-1
Non-energy Use	11	10	-4
Converted to Electricity and Other	6	4	-24
Total Consumption	141	137	-3
NEB Export Authorization	152	152	-

Notes:

- (a) Figures represent total industry activity and are derived from a number of sources:
 Production - Statistics Canada (Catalogue 26-006)
 Net Exports - EMR Oil Supply Branch
 Consumption - Statistics Canada (Catalogue 45-004)
- (b) Includes non-energy use consumption.

Canadian Natural Gas Prices: 1974-1987 in dollars per gigajoule

	Field Gate Including Export Flow Back	Alberta Border	Toronto City Gate	Weighted Ontario Sales Realization	Ontario Market		
					Residential	Commercial	Industrial
1974	-	0.28	0.55	0.83	1.26	0.94	0.64
1975	-	0.53	0.82	1.13	1.56	1.21	0.94
1976	0.98	0.84	1.24	1.61	2.04	1.69	1.40
1977	1.21	1.04	1.47	1.85	2.44	1.96	1.37
1978	1.44	1.28	1.77	2.14	2.74	2.22	1.90
1979	1.66	1.36	1.92	2.35	3.03	2.43	2.06
1980	2.30	1.61	2.23	2.69	3.43	2.73	2.36
1981	2.34	1.75	2.42	3.40(a)	4.24	3.41	3.03
1982	2.53	2.01	2.80	4.16(a)	4.93	4.12	3.70
1983	2.48	2.48	3.38	4.74(a)	5.72	4.78	4.15
1984	2.61	2.78	3.71	4.77	5.79	4.86	4.16
1985	2.47	2.80	3.76	4.76	5.83	4.89	4.13
1986(b)	2.32	2.80	3.78	4.71	6.09	4.86	4.03
1987 Jan				4.56	5.33	4.48	3.84
Feb				4.63	5.45	4.61	3.76
Mar				4.60	5.53	4.66	3.75
Apr				4.54	5.69	4.69	3.72
May				4.48	6.03	4.75	3.70
Jun				4.31	6.53	4.84	3.61
Jul				4.37	6.71	4.86	3.66
Aug				4.27	6.89	4.86	3.57
Sep				4.28	6.73	4.77	3.57
Oct				4.40	5.94	4.75	3.59
Nov				4.53	5.70	4.69	3.68
Dec				4.60	5.59	4.67	3.71
Average				4.46	6.01	4.72	3.68
1988 Jan				4.60	5.49	4.63	3.61
Feb				4.59	5.39	4.55	3.80

Notes:

- (a) The rising average sales realizations for the years 1981 to 1983 reflect the imposition of the Natural Gas and Gas Liquids Tax.
- (b) Effective November 1, 1986, a new gas agreement between the federal and provincial governments provided for the deregulation of natural gas prices and markets. As a result, the price of natural gas in domestic markets is now subject to the interplay between buyers and sellers.

A5

Canadian Crude Oil Prices: 1979-1988

	Conventional Crude Oil Wellhead Price ^(a)		Petroleum Compensation & Other Charges		Cost of Crude Oil Exclusive of Transportation ^(b)		Refiner Acquisition Cost at Montreal	
	\$/bbl	\$/m ³	\$/bbl	\$/m ³	\$/bbl	\$/m ³	\$/bbl	\$/m ³
1979								
Jan 1	12.75	80.23	0.33	2.08	13.08	2.31	14.13	88.92
Jul 1	13.75	86.53	0.33	2.08	14.08	88.61	15.13	95.21
Sep 1	13.75	86.53	0.50	3.15	14.25	89.68	15.30	96.28
Nov 1	13.75	86.53	0.85	5.35	14.60	91.88	15.65	98.49
1980								
Jan 1	14.75	92.83	0.85	5.35	15.60	98.18	16.65	104.78
Aug 1	16.75	105.41	1.75	11.01	18.50	116.42	19.73	124.16
Nov 1			2.55	16.04	19.30	121.45	20.53	129.20
1981								
Jan 1	17.75	111.70	5.05	31.77	22.80	143.47	24.07	151.47
1982								
Jan 1	23.50	147.89	7.45	46.89	30.95	194.78	32.54	204.77
1983								
Jan 1	29.75	187.22	4.91	30.89	34.66	218.11	35.79	225.25
1984								
Nov 10	29.75	187.22	7.69	48.39	37.44	235.61	39.44	248.21
1985								
Jun 1	36.40	229.06					38.30	241.02
Dec	37.06	233.22					38.99	245.36
1986								
Jan	32.79	206.34					34.76	218.93
Feb	22.20	139.70					24.18	152.16
Mar	16.48	103.71					18.46	116.17
Apr	15.74	99.05					17.71	111.45
May	18.25	114.85					20.17	126.93
Jun	17.28	108.74					19.25	121.14
Jul	14.60	91.88					16.58	104.34
Aug	17.68	111.26					19.66	123.72
Sep	18.90	118.94					20.97	131.96
Oct	18.47	116.23					20.54	129.26
Nov	18.79	118.24					20.86	131.27
Dec	19.23	121.01					21.30	134.04
1987								
Jan	22.74	143.10					24.87	156.51
Feb	21.94	138.07					24.17	152.10
Mar	20.36	128.13					22.48	141.47
Apr	21.90	137.80					24.05	151.35
May	23.13	145.56					25.28	159.09
Jun	23.96	150.78					26.11	164.31
Jul	25.17	158.39					27.32	171.92
Aug	25.10	157.95					27.25	171.48
Sep	23.09	145.31					25.28	159.09
Oct	23.25	146.31					25.44	160.09
Nov	23.09	145.31					25.28	159.09
Dec	20.95	131.84					23.14	145.62
1988								
Jan	19.44	122.34					21.60	135.93
Feb	19.02	119.69					21.17	133.22
Mar	17.67	111.20					19.81	124.66

Notes:

- (a) Starting June 1, 1985, i.e. following deregulation, the wellhead price shown here is the Edmonton purchase price less estimated gathering costs of approximately \$3.90/m³ (62¢/bbl).
- (b) Gathering and transportation costs, and charges as applicable, make up the difference between the wellhead price and the refiner acquisition cost at Montreal. These costs amounted to \$13.78/m³ (\$2.19/bbl) on December 1, 1987.

A6**Average Crude Oil Refiner Acquisition Costs by Region**in dollars per cubic metre⁽¹⁾

		British Columbia	Prairie Provinces	Ontario	Quebec ⁽²⁾	Atlantic ⁽²⁾	Total Canada
1985	Dec	241.96	234.47	241.77	244.48	252.60	242.10
1986	Jan	225.22	210.50	234.03	242.48	246.43	230.49
	Feb	174.94	144.86	207.92	218.90	218.24	193.64
	Jul	105.72	95.28	116.99	108.92	102.45	106.79
	Dec	127.24	126.42	128.82	132.35	132.59	128.97
1987	Jan	137.44	146.44	134.34	140.90	145.24	140.15
	Feb	146.44	142.16	148.20	150.93	154.18	147.70
	Mar	143.80	137.19	145.51	145.85	145.68	143.23
	Apr	144.48	140.71	146.69	151.60	154.80	148.78
	May	147.80	149.01	147.25	155.42	156.19	150.02
	Jun	153.54	154.61	153.04	157.39	158.08	154.93
	Jul	158.14	160.84	162.40	164.21	163.55	161.66
	Aug	165.19	161.41	166.44	164.91	165.12	164.43
	Sep	162.29	148.20	165.19	158.58	157.37	158.89
	Oct	155.37	150.46	157.41	155.23	154.80	154.56
	Nov	155.12	148.76	156.56	158.06	157.83	154.59
	Dec	150.65	135.49	149.84	151.62	151.97	146.86
1988	Jan	140.84	125.80	141.49	141.51	143.73	138.01
	Feb	133.92	123.34	134.14	136.80	139.70	131.96
	Mar	123.91	114.66	128.33	127.56	126.62	124.10

(1) The variation in average refiner acquisition cost by region is due to quality differences and the lag time between the actual purchase and delivery dates. Assuming an estimated delivery time from Edmonton to Montreal of six weeks, receipts of any given month at Montreal reflect a mixture of crude purchases made during the two previous months.

(2) The exact average cost of crude oil imports is not available for Quebec and the Atlantic region due to confidentiality considerations. Therefore, the average cost of imports for total eastern Canada has been used to determine the regional averages for Quebec and Atlantic.

A7**Average Crude Oil Transportation Costs from Edmonton**in dollars per cubic metre⁽¹⁾

		Vancouver	Regina	Sarnia	Toronto	Montreal
1985	Dec	5.10	1.45	6.98	7.43	8.50
1986	Jan-Jul	5.10	1.64	7.17	7.61	8.81
	Aug	5.10	1.65	7.17	7.61	8.87
	Sep-Oct	5.10	1.80	7.42	7.92	9.25
	Nov-Dec	4.47	1.80	7.42	7.92	9.25
1987	Jan	4.47	1.95	7.68	8.24	9.75
	Feb	4.47	1.95	7.55	8.12	9.63
	Mar	4.47	1.95	7.55	8.12	9.56
	Apr	4.47	1.95	7.49	8.04	9.56
	May	4.47	1.95	7.55	8.12	9.63
	Jun	4.47	1.95	7.55	8.12	9.63
	Jul	4.47	1.95	7.55	8.12	9.63
	Aug	4.47	1.95	7.55	8.12	9.63
	Sep	4.47	2.07	7.68	8.30	9.82
	Oct	4.69	2.07	7.68	8.30	9.82
	Nov	5.09	2.07	7.68	8.30	9.82
	Dec	5.09	2.07	7.68	8.30	9.82
1988	Jan	6.29	2.04	7.55	8.12	9.63
	Feb	6.29	2.04	7.48	8.12	9.63
	Mar	6.29	2.04	7.42	8.04	9.56

Source:

Energy, Mines and Resources Canada, Oil Branch

(1) Includes pipeline tariffs and pipeline losses but excludes trucking charges.

A8**Canadian Acquisition Costs vs. Product Prices** in cents per litre

	Average Unit Revenue from Total Petroleum Product Sales ⁽¹⁾	Average Refiner Acquisition Cost (Unit) (lagged 60 days) ⁽²⁾	Differential (To cover R&M Costs and Profits, Retail Margin and FST + FET)
1985			
Dec	33.74	24.47	10.27
1986			
Jan	34.37	23.09	11.26
Feb	34.25	23.06	11.19
Mar	31.82	23.05	8.77
Apr	27.93	19.36	8.57
May	25.82	14.53	11.29
Jun	25.72	11.73	13.99
Jul	24.91	11.73	13.18
Aug	23.91	11.78	12.13
Sep	23.84	10.68	13.16
Oct	23.71	11.10	12.61
Nov	23.58	12.03	11.55
Dec	23.34	12.50	10.84
1987			
Jan	22.74	12.48	10.26
Feb	23.86	12.90	10.96
Mar	24.08	14.02	10.06
Apr	24.20	14.77	9.43
May	23.38	14.32	9.06
Jun	24.34	14.68	9.66
Jul	24.54	15.00	9.54
Aug	24.79	15.49	9.30
Sep	25.14	16.17	8.97
Oct	24.65	16.44	8.21
Nov	25.00	15.89	9.11
Dec	24.99	15.45	9.54
1988			
Jan	24.43	15.46	8.97
Feb	24.09	14.69	9.40
Mar	23.97	13.80	10.17

Sources:

(1) Statistics Canada, Prices Division

(2) Energy, Mines and Resources Canada, Oil Branch

A9**Average Net Prices for Selected Major Petroleum Products and Trade Classes by Region in cents per litre⁽¹⁾**

	1986	1987	Change ⁽²⁾ %
Regular Unleaded Gasoline – Branded Retail			
Atlantic	32.9	29.9	- 9.1
Quebec	29.7	30.4	2.4
Ontario	26.4	27.6	4.5
Prairies	30.6	28.6	- 6.5
Pacific	29.1	28.9	- 0.7
Total Canada	28.5	28.7	0.7
Diesel Fuel – Commercial and Industrial			
Atlantic	25.3	21.7	- 14.2
Quebec	23.1	21.1	- 8.7
Ontario	24.0	20.9	- 12.9
Prairies	23.9	21.0	- 12.1
Pacific	24.1	21.5	- 10.8
Total Canada	23.9	21.1	- 11.7
Light Fuel Oil – Branded Retail			
Atlantic	31.2	27.1	- 13.1
Quebec	28.4	25.1	- 11.6
Ontario	31.5	28.6	- 9.2
Pacific	30.9	27.8	- 10.0
Total Canada	30.5	27.2	- 10.8
Heavy Fuel Oil #6 – All trade classes			
Atlantic	15.2	13.9	- 8.6
Quebec	12.8	13.8	7.8
Ontario	11.3	12.8	13.3
Pacific	10.4	12.7	22.1
Total Canada	12.5	14.0	12.0
Total Petroleum Products⁽³⁾ – All trade classes			
Atlantic	27.7	23.6	- 14.8
Quebec	26.2	23.4	- 10.1
Ontario	26.6	24.5	- 7.9
Prairies	27.3	24.7	- 9.5
Pacific	26.3	25.1	- 4.6
Total Canada	26.7	24.3	- 9.0

Source:
Statistics Canada, Prices Division

(1) Weighted average prices shown were derived from volumes and sales revenue data reported through a survey of major refiners for a wide range of finely specified products and trade classes. The prices are net of provincial road taxes, federal sales and excise taxes, and dealer margins.

(2) This represents the change in net prices compared to the year earlier period.

(3) This represents the summation of petroleum products from the sample selection reported to Statistics Canada in their survey.

A10

Petroleum Product Prices for Selected Major Products Sold to Private Brand Resellers

	1986		1987	
	Price ¢ / litre	Market Share ⁽¹⁾ %	Price ¢ / litre	Market Share ⁽¹⁾ %
Premium Unleaded Gasoline				
Quebec	22.4	9.0	24.3	10.7
Ontario	23.1	9.1	24.1	10.4
Prairies	22.3	4.9	23.4	5.7
Regular Unleaded Gasoline				
Quebec	22.0	10.8	22.9	11.5
Ontario	22.3	18.0	22.5	19.1
Prairies	22.3	12.2	22.0	11.8
Regular Leaded Gasoline				
Quebec	19.4	15.4	21.1	19.8
Ontario	20.7	20.7	21.1	23.4
Prairies	21.1	13.1	20.5	13.7
Diesel Fuel				
Quebec	18.1	11.4	19.7	16.0
Ontario	21.0	8.5	19.3	9.6
Light Fuel Oil				
Quebec	22.2	26.2	18.7	32.4
Ontario	20.7	28.0	18.5	33.0
Pacific	27.6	9.0	23.7	9.4

Source:
Statistics Canada, Prices Division

(1) Reflects an estimated market share of sales by reporting refiners, excluding product imports.

A11

Oil Products Sales Volumes - Refiners and Marketers

in millions of cubic metres

	Nationals			Regionals			Total		
	1986	1987	Change %	1986	1987	Change %	1986	1987	Change %
Clean Products	46.8	48.3	3	18.4	19.3	4	65.2	67.6	4
Heavy and Specialty Products	10.5	11.0	6	4.2	4.3	-	14.7	15.3	4
Total Sales	57.3	59.3	4	22.6	23.6	4	79.9	82.9	4
Less: Exports	3.3	3.6	12	2.0	2.4	18	5.3	6.0	14
Gross sales in Canada	54.0	55.7	3	20.6	21.2	2	74.6	76.9	3
Less: Sales to Other Refiners	1.2	1.2	-2	0.3	0.2	-3	1.5	1.4	-2
Net Sales in Canada	52.8	54.5	3	20.3	20.9	2	73.1	75.4	3

A12**Net Income by Sector and Segment** in millions of dollars

	1986	1987	Change	%
Canadian-Controlled Companies				
Upstream	- 2200	616	2816	-
Downstream	369	257	- 112	- 30
Other Canadian Operations	- 727	138	865	-
Foreign Activities	- 903	48	951	-
Total Canadian-Controlled	- 3460	1060	4520	-
Foreign-Controlled Companies				
Upstream	414	1553	1139	275
Downstream	475	643	168	35
Other Canadian Operations	- 89	94	183	-
Foreign Activities	- 35	25	60	-
Total Foreign-Controlled	765	2316	1550	202
Total Industry				
Upstream	- 1785	2169	3954	-
Downstream	844	900	56	7
Other Canadian Operations	- 817	233	1050	-
Foreign Activities	- 937	73	1010	-
Grand Total	- 2695	3375	6070	-

A13**Rates of Return: Canadian Petroleum Industry** in percent

	1982	1983	1984	1985	1986	1987	Five-Year Average ending in	
							1986	1987
Return on Average Capital Employed								
Upstream								
Canadian-Controlled Companies	6.5	4.5	6.2	5.1	- 3.4	5.1	3.8	3.5
Foreign-Controlled Companies	10.0	14.0	11.4	9.5	2.9	9.0	9.6	9.4
Total Industry	7.8	8.1	8.4	6.9	- 0.8	6.7	6.1	5.9
Downstream ^(a)								
Canadian-Controlled Companies	- 1.0	- 2.4	3.9	1.8	5.9	4.1	0.9	2.0
Foreign-Controlled Companies	4.6	0.8	4.0	3.2	7.5	8.3	4.0	4.8
Total Industry*	3.1	- 0.1	4.0	1.4	6.9	6.5	3.1	3.7
Total Operations ^(b)								
Canadian-Controlled Companies	4.3	2.2	6.1	3.9	- 3.8	4.9	2.5	2.6
Foreign-Controlled Companies	7.3	8.2	8.3	7.2	3.7	8.4	6.9	7.2
Total Industry	5.6	4.9	7.1	5.2	- 0.8	6.4	4.4	4.5
*Memo. National Refiners/Marketers	2.3	- 1.1	3.3	0.8	6.6	6.0	2.4	3.1
Regional Refiners/Marketers	5.4	3.3	6.2	2.8	7.5	7.8	5.0	5.5
Return on Average Equity								
Canadian Operations								
Canadian-Controlled Companies	4.1	- 2.0	5.9	3.5	- 13.2	5.7	- 0.3	-
Foreign-Controlled Companies	9.9	11.9	12.7	11.1	4.6	12.6	10.0	10.6
Total Industry	7.2	5.2	9.5	7.1	- 4.8	9.2	4.8	5.3
Total Operations ^(b)								
Canadian-Controlled Companies	1.3	- 3.2	6.6	3.6	- 16.8	5.7	- 1.7	- 0.8
Foreign-Controlled Companies	9.7	11.9	12.7	11.0	4.3	12.6	9.9	10.5
Total Industry	5.7	4.6	9.8	7.1	- 7.1	9.1	4.0	4.7

Notes:

(a) Downstream here represents oil products operations only, i.e. it excludes petrochemical and other downstream operations

(b) Upstream downstream (here also includes petrochemicals and other downstream activities), other Canadian and foreign operations.

A14

Rates of Return: Petroleum and Other Industries in percent^(a)

	1982	1983	1984	1985	1986	1987	Five-Year Average ending in	
							1986	1987
Return On Shareholders Equity^(b)								
Petroleum	8.0	5.0	10.0	9.5	-5.2	9.7	5.4	5.8
Other Non-Financial	5.0	8.9	10.7	9.6	9.7	12.1	8.8	10.2
Manufacturing	3.9	9.5	12.1	10.2	10.6	14.0	9.3	11.3
Mining	-1.8	1.6	2.3	0.9	1.3	10.7	0.8	3.3
Other Industries	8.4	10.0	11.4	11.2	10.6	10.2	10.3	10.7
Return On Capital Employed^(c)								
Petroleum	6.9	4.7	7.2	6.7	-0.2	6.8	5.1	5.1
Other Non-Financial	5.1	7.1	8.2	7.6	7.5	8.9	7.1	7.9
Manufacturing	4.3	8.0	9.6	8.3	8.5	10.6	7.7	9.0
Mining	4.4	1.9	3.5	2.0	2.3	8.6	2.8	3.7
Other Industries	6.9	7.3	8.0	8.0	7.6	7.4	7.6	7.7

Source: Statistics Canada 61-003, Industrial Corporations Quarterly

Notes:

- Information on Table 3 is based on PMA data as per Appendix A14.
- Return on equity is defined as net profit after tax and extraordinary items, divided by average book equity. It measures the rate of return on shareholders' investment (paid-in capital and retained earnings). This measure is often used to compare the performance of companies that may vary by type and by size.
- Capital employed is defined as total assets, less current liabilities. The net income figures used to compute rate of return on capital employed have been adjusted by adding the after-tax interest expense on borrowed funds.

A15

Reinvestment Rates in percent

	Total ^(a)		Upstream ^(b)		Upstream ^(c) plus Downstream	
	1986	1987	1986	1987	1986	1987
Integrated & Refiners	62	55	81	60	64	55
Oil and Gas Producers						
Senior Producers	100	74	93	70	94	70
Junior Producers	141	129	143	114	143	138
Total Oil and Gas Producers	113	91	107	82	107	89
Total Industry	88	75	98	74	88	73
Canadian-Controlled	110	87	123	81	102	84
Foreign-Controlled	72	65	81	68	74	64

Notes:

- Total capital expenditures (net of incentive grants) as a percentage of total internal cash flow. The calculations do not reflect changes in inventories. Had changes in the cost of inventories been included, the reinvestment rate would have been 79% in 1987 vs. 59% in 1986.
- Upstream capital expenditures (net of incentive grants) in Canada as a percentage of upstream cash flow.
- Net upstream plus downstream ("petroleum-related") capital expenditures in Canada as a percentage of internal cash flow generated by petroleum-related activities.

A16

Gross Exploration Expenditures in Canada - by Area in millions of dollars

	1986	1987	Change %
Provincial Lands			
British Columbia	179	169	- 6
Alberta	1757	1971	12
Saskatchewan	103	138	35
Other Provinces	16	13	- 15
Total Provincial Lands	2055	2291	11
Canada Lands			
Beaufort Sea	394	141	- 64
Labrador East	464	178	- 62
Atlantic Shelf South	232	37	- 84
Other Canada Lands	128	53	- 58
Total Canada Lands	1218	410	- 66
Total Canada	3273	2701	- 17

A17

PIP and CEDIP Incentives by Area and Type of Expenditure in millions of dollars

	Exploration	Development and Production	Total	Canadian- Controlled	Foreign- Controlled
British Columbia					
1986	8	4	11	11	-
1987	4	3	7	5	2
Alberta					
1986	97	53	150	148	3
1987	78	69	146	111	36
Saskatchewan					
1986	6	6	12	12	-
1987	4	13	17	14	3
Other Provinces					
1986	1	1	2	2	-
1987	1	2	2	2	1
Beaufort Sea					
1986	198	-	198	194	4
1987	10	-	10	10	-
Labrador East					
1986	289	-	289	283	5
1987	54	-	54	52	2
Atlantic Shelf South					
1986	92	-	92	81	12
1987	7	-	7	7	-
Other Canada Lands					
1986	61	-	61	56	6
1987	21	-	21	18	3
Total					
1986	752	63	815	785	30
1987	179	85	265	218	46

Note:

PIP grants are incentives to qualifying enterprises carrying out exploration, development and production activities in Canada. The Government of Alberta administers and funds the grants for activities within that province, and the Government of Canada administers and funds the program elsewhere in Canada.

A18 Well Completions and Metres Drilled in Canada

	Exploratory			Development		
	1986	1987	Change %	1986	1987	Change %
Well Completions in number of wells						
British Columbia	62	57	- 8	105	74	- 30
Alberta	1531	1865	22	3196	3066	- 4
Saskatchewan	311	371	19	861	1128	31
Other Provinces	104	60	- 42	131	109	- 17
Northern Canada(a)	40	5	- 87	17	22	29
Offshore(b)	17	8	- 53	-	-	-
Total	2065	2366	15	4310	4399	2
Metres Drilled in thousands						
British Columbia	116	118	2	159	122	- 23
Alberta	2284	2892	27	3850	3736	- 3
Saskatchewan	300	364	21	820	968	18
Other Provinces	77	45	- 42	96	83	- 14
Northern Canada(a)	88	13	- 85	15	19	27
Offshore(b)	69	30	- 57	-	-	-
Total	2934	3462	18	4940	4928	-

Source:
Oilweek, February 22, 1988

Notes:

- (a) All areas in Canada North of 60°, including Hudson Bay
(b) East coast and West coast offshore areas.

A19 Comparison of Interest Charges with Income before Taxes in millions of dollars(a)

	(1) Income Before Interest and Taxes	(2) Interest Charges Incurred	(3) Interest Coverage Ratio times
Integrals and Refiners	3653	412	8.9
Oil and Gas Producers			
Senior Producers	2812	1279	2.2
Junior Producers	1100	696	1.6
Total Oil and Gas Producers	3912	1975	2.0
Total Industry	7565	2387(b)	3.2
Canadian-Controlled	3207	1671	1.9
Foreign-Controlled	4358	716	6.1

Notes:

- (a) The figures in Column 1 represent the total of income from total operations before taxes and expensed interest. Column 2 shows total interest charges incurred (both expensed and capitalized). Column 3 is the ratio of Column 1 to Column 2.
(b) In addition to the \$2.3 billion of interest charges expensed in 1987, \$115 million was capitalized (mostly by Canadian-controlled companies).

A20**Dividend Payments**

	1986 \$ millions	1987	1986 % of net income ^(a)	1987
Integrateds and Refiners	731	795	67	40
Oil and Gas Producers				
Senior Producers	1700	585	-78	57
Junior Producers	142	156	-9	44
Total Oil and Gas Producers	1842	741	-49	54
Total Industry	2573	1536	-95	46
Canadian-Controlled	593	494	-17	47
Foreign-Controlled	1980	1042	259	45

Note:

(a) Derived by dividing dividend payments for each company group by their net income on total operations (Appendices B1-7).

A21**Canadian Ownership and Control by Company Group and Category**
in percent

	Ownership		Control	
	1986	1987	1986	1987
Petroleum Related Revenues^(a)				
Integrateds and Refiners	42.4	41.4	31.9	29.1
Oil and Gas Producers	51.7	50.0	61.8	59.1
Total Industry	45.1	43.8	40.4	37.4
Upstream Revenues				
Integrateds and Refiners	40.3	39.2	25.4	20.4
Oil and Gas Producers	49.5	47.9	59.8	57.1
Total Industry	46.6	45.1	49.0	45.2
Other Measurement Bases				
Revenues				
Natural Gas	50.5	49.0	56.8	52.8
Crude Oil	44.6	43.5	43.2	40.5
Downstream	44.0	43.0	34.8	32.4
Exploration Expenditures	62.7	54.0	67.2	54.5
Total Assets in Canada	54.5	53.6	57.8	53.4

Note:

(a) Many petroleum companies have operations in non petroleum-related fields which are not included here. Upstream plus downstream revenues have been taken as a substitute for a more specifically defined figure reflecting every aspect of the Canadian petroleum industry.

A22
'In-house' R&D Expenditures in millions of dollars

	1986			1987		
	Corporate Funds(a)	Government Funds	Total	Corporate Funds	Government Funds	Total
Upstream						
Conventional Exploration and Production	30.7	0.2	30.9	26.4	0.1	26.5
Enhanced Recovery	2.6	-	2.6	5.5	-	5.5
Bitumen						
Surface Mining	3.0	-	3.0	7.8	-	7.8
In-Situ	47.8	6.8	54.6	30.7	4.3	35.0
Total Bitumen	50.8	6.8	57.6	38.5	4.3	42.8
Refining	57.2	1.0	58.3	54.3	0.4	54.6
Other						
Other Energy	4.0	0.1	4.1	9.2	0.6	9.8
Non Energy	12.7	0.5	13.2	3.9	-	3.9
Total Other	16.7	0.7	17.4	13.1	0.5	13.6
Total Expenditures	158.1	8.7	166.8	137.7	5.3	143.0

Note

(a) Corporate funds are composed of internal funds, funds from subsidiaries and affiliates, and funds from others for contract work performed by the reporting energy enterprise.

A23
Income and Expense Statement: 1979 - 1987 as percent of revenues

	1979	1980	1981	1982	1983	1984	1985	1986	1987
Upstream									
Revenues	100	100	100	100	100	100	100	100	100
Royalties and other Payments	31	31	29	27	25	24	23	18	17
PGRT and other Taxes	-	-	6	9	8	8	7	3	-
Interest Expenses	n/a	n/a	6	7	6	6	6	10	9
Operating Costs and other Cash Items	20	21	21	20	18	18	20	33	29
Current Income Tax	8	6	8	9	11	11	11	5	6
Cash Flow	40	42	30	28	31	32	34	31	38
Depreciation, Depletion and Amortization	7	8	8	8	12	10	11	23	21
Other Non-cash Charges	8	9	8	5	4	3	3	6	4
Deferred Income Tax	6	7	5	5	5	7	6	-	2
Extraordinary Gains	-	-	-	-	-	-	-3	-12	1
Net Income	19	18	10	10	11	12	10	-11	12
Downstream									
Revenues	100	100	100	100	100	100	100	100	100
PGRT and other Taxes	5	7	6	6	6	6	7	11	14
Cost of Goods Sold	71	69	75	80	83	80	79	68	64
Interest Expenses	n/a	n/a	1	1	1	1	1	-	-
Operating Costs and other Cash Items	13	11	9	10	10	9	10	13	13
Current Income Tax	2	4	3	-1	-1	-	-	2	2
Cash Flow	9	9	7	4	2	3	3	6	6
Depreciation, Depletion and Amortization	2	2	1	2	2	2	2	3	3
Other Non-cash Charges	-	-	-	-	-	-	-	-	-
Deferred Income Tax	2	1	1	1	1	-	-	-	-
Extraordinary Gains	-	-	-	-	-	-	-	-1	-
Net Income	5	6	4	1	-	1	1	3	3

Appendix B Complete Survey Results

B1

Income and Expense Statement - All Operations in millions of dollars Total Industry

	Upstream			Downstream			Other Operations			Foreign Activities			Total Operations		
	1986	1987	Change %	1986	1987	Change %	1986	1987	Change %	1986	1987	Change %	1986	1987	Change %
Total Revenues	16990	17829	4.9	26481	27369	3.4	2792	2793	-	1667	1341	-19.6	47930	49332	2.9
Royalties and other Payments	3144	3043	-3.2	0	0	-	0	0	-	0	0	-	3144	3043	-3.2
PGRT and other Taxes	452	0	-100.0	2972	3959	33.2	21	21	0.9	87	89	3.0	3532	4069	15.2
Total Revenue after Royalties	13393	14786	10.4	23510	23410	-0.4	2771	2772	-	1580	1252	-20.8	41254	42220	2.3
Cost of Goods Sold	0	0	-	17982	17559	-2.4	1095	1308	19.4	284	285	0.3	19361	19152	-1.1
Interest Expenses	1708	1629	-4.7	119	94	-21.0	844	524	-38.0	90	27	-69.8	2761	2274	-17.7
Operating Costs	4735	4620	-2.4	3189	3371	5.7	678	624	-8.0	550	284	-48.4	9152	8899	-2.8
R&D Costs (excluding Oil Sands)	71	62	-12.8	70	69	-1.5	11	3	-73.4	0	0	62.3	153	135	-11.9
Other Expenses	830	556	-33.0	54	33	-39.0	154	166	7.6	102	59	-41.8	1140	814	-28.6
Oil Sands R&D Expensed	38	27	-30.1	0	0	-	0	0	-	0	0	-	38	27	-30.1
E&D Expensed	981	743	-24.2	0	0	-	28	35	24.3	2	9	276.9	1011	787	-22.1
Depreciation	887	916	3.3	698	715	2.4	243	214	-11.8	79	53	-32.9	1907	1898	-0.5
Depletion	2239	1851	-17.3	0	0	-	21	17	-22.8	647	315	-51.3	2907	2182	-24.9
Write-Offs and Amortization	872	831	-4.7	-75	16	-	21	-79	-	165	-6	-	982	761	-22.5
Non-cash Charges and E&D	5016	4368	-12.9	623	730	17.3	313	186	-40.6	892	371	-58.4	6845	5656	-17.4
Income before Taxes	1032	3551	244.0	1473	1554	5.5	-325	-38	-	-338	225	-	1842	5291	187.3
Federal Income Tax	757	971	28.2	346	431	24.6	-285	-160	-	112	108	-3.8	931	1350	45.0
Provincial Income Tax	16	101	-	73	120	63.2	-32	-46	-	0	0	-	57	235	310.2
Current Income Tax	774	1131	46.3	420	551	31.3	-317	-206	-	112	108	-3.6	989	1585	60.3
Income after Current Income Tax	258	2419	-	1053	1004	-4.7	-8	167	-	-451	116	-	853	3706	334.4
Deferred Income Tax	75	411	-	-4	108	-	35	-2	-	-42	9	-	64	525	-
Net Income after Taxes	184	2008	-	1057	896	-15.3	-44	169	-	-409	108	-	789	3181	303.3
Extraordinary Gains	-1969	160	-	-213	4	-	-773	64	-	-529	-34	-	-3484	194	-
Net Income after Extraordinary Items	-1785	2169	-	844	900	6.6	-817	233	-	-937	73	-	-2695	3375	-
Internal Cash Flow	5275	6787	28.7	1676	1734	3.4	305	353	15.7	442	488	10.4	7698	9362	21.6

B2

Income and Expense Statement - All Operations in millions of dollars Integrateds and Refiners

	Upstream			Downstream			Other Operations			Foreign Activities			Total Operations		
	1986	1987	Change %	1986	1987	Change %	1986	1987	Change %	1986	1987	Change %	1986	1987	Change %
Total Revenues	5308	5815	9.6	25871	26801	3.6	1700	1763	3.7	114	191	67.5	32992	34570	4.8
Royalties and other Payments	955	946	-1.0	0	0	-	0	0	-	0	0	-	955	946	-1.0
PGRT and other Taxes	126	0	-100.0	2970	3958	33.3	15	15	4.0	0	0	-42.9	3111	3973	27.7
Total Revenue after Royalties	4226	4869	15.2	22901	22843	-0.3	1685	1748	3.7	114	191	67.5	28926	29651	2.5
Cost of Goods Sold	0	0	-	17687	17364	-1.8	1094	1307	19.6	0	118	-	18780	18789	-
Interest Expenses	4	4	6.5	102	78	-23.1	390	304	-22.0	0	0	-	496	387	-22.0
Operating Costs	1727	1684	-2.4	3003	3137	4.5	105	139	32.8	67	19	-71.4	4902	4980	1.6
R&D Costs (excluding Oil Sands)	38	31	-16.9	70	69	-1.5	10	3	-75.1	0	0	-	118	103	-12.7
Other Expenses	144	120	-17.0	54	31	-42.8	32	61	87.9	0	0	81.9	231	212	-8.2
Oil Sands R&D Expensed	19	12	-38.8	0	0	-	0	0	-	0	0	-	19	12	-38.8
E&D Expensed	346	226	-34.7	0	0	-	24	20	-17.3	0	0	-100.0	371	246	-33.6
Depreciation	303	314	3.6	655	661	1.0	71	83	16.3	1	2	50.4	1031	1060	2.9
Depletion	268	303	13.3	0	0	-	0	0	2.9	21	18	-11.5	289	322	11.5
Write-Offs and Amortization	246	268	9.1	19	18	-5.3	37	-11	-	6	-0	-	307	274	-10.5
Non-cash Charges and E&D	1182	1123	-5.0	674	679	0.8	133	92	-30.4	28	20	-27.6	2016	1914	-5.0
Income before Taxes	1132	1907	68.4	1312	1485	13.2	-79	-159	-	19	33	76.6	2384	3266	37.0
Federal Income Tax	418	421	0.7	340	429	26.2	-250	-154	-	18	13	-27.7	526	709	34.7
Provincial Income Tax	58	134	131.6	71	118	65.7	-18	-40	-	0	0	-	111	212	90.5
Current Income Tax	476	555	16.7	411	547	33.0	-268	-194	-	18	13	-27.0	638	921	44.4
Income after Current Income Tax	656	1352	106.0	901	938	4.1	189	35	-81.2	0	19	-	1746	2344	34.3
Deferred Income Tax	126	314	148.7	97	103	6.2	133	-14	-	1	5	396.4	357	408	14.3
Net Income after Taxes	530	1038	95.8	804	835	3.9	56	49	-12.1	-1	14	-	1389	1937	39.4
Extraordinary Gains	-75	0	-	-45	18	-	-178	35	-	-4	0	-	-302	53	-
Net Income after Extraordinary Items	455	1038	127.9	759	854	12.5	-122	84	-	-5	14	-	1087	1990	83.0
Internal Cash Flow	1838	2474	34.6	1575	1617	2.7	322	128	-60.2	28	39	41.6	3762	4259	13.2

B3

Income and Expense Statement - All Operations in millions of dollars Junior Oil and Gas Producers

	Upstream			Downstream			Other Operations			Foreign Activities			Total Operations		
	1986	1987	Change %	1986	1987	Change %	1986	1987	Change %	1986	1987	Change %	1986	1987	Change %
Total Revenues	3293	3285	-0.2	22	108	384.9	365	379	3.9	1012	696	-31.2	4692	4469	-4.8
Royalties and other Payments	667	593	-11.1	0	0	-	0	0	-	0	0	-	667	593	-11.1
PGRT and other Taxes	63	0	-100.0	0	0	-	-1	-0	-	50	57	13.9	113	57	-49.0
Total Revenue after Royalties	2563	2692	5.0	22	108	383.6	366	379	3.8	962	639	-33.6	3913	3818	-2.4
Cost of Goods Sold	0	0	-	9	18	96.7	2	1	-61.3	218	80	-63.3	229	99	-56.7
Interest Expenses	693	568	-18.1	0	0	45.6	47	70	50.3	52	12	-76.4	793	651	-17.9
Operating Costs	755	782	3.5	6	78	-	242	169	-30.0	317	169	-46.8	1319	1198	-9.2
R&D Costs (excluding Oil Sands)	1	0	-100.0	0	0	-	0	0	33.9	0	0	62.3	2	1	-63.1
Other Expenses	237	193	-18.6	0	1	31.5	28	34	22.5	37	32	-13.2	302	259	-14.1
Oil Sands R&D Expensed	1	-1	-	0	0	-	0	0	-	0	0	-	1	-1	-
E&D Expensed	72	65	-10.4	0	0	-	0	0	-	2	0	-86.7	74	65	-12.3
Depreciation	160	187	16.6	1	7	-	28	24	-13.1	67	37	-45.4	257	255	-0.6
Depletion	860	660	-23.2	0	0	-	11	11	6.3	303	180	-40.7	1173	851	-27.5
Write-Offs and Amortization	333	5	-98.5	29	0	-100.0	-11	-17	-	135	4	-97.4	487	-9	-
Non-cash Charges and E&D	1426	916	-35.8	30	7	-76.5	28	18	-34.1	507	220	-56.6	1991	1161	-41.7
Income before Taxes	-549	235	-	-23	3	-	20	87	338.7	-170	125	-	-723	450	-
Federal Income Tax	34	49	46.3	1	1	-45.4	10	12	21.8	62	70	13.0	107	132	23.6
Provincial Income Tax	-98	-121	-	0	0	-42.2	-0	1	-	0	0	-100.0	-98	-120	-
Current Income Tax	-64	-72	-	2	1	-44.6	10	13	31.0	62	70	13.0	9	12	31.8
Income after Current Income Tax	-485	306	-	-25	2	-	10	74	-	-232	55	-	-732	437	-
Deferred Income Tax	-39	93	-	-0	-0	-	-2	2	-	-29	6	-	-71	101	-
Net Income after Taxes	-445	213	-	-25	2	-	13	72	-	-203	49	-	-661	336	-
Extraordinary Gains	-356	41	-	-167	-14	-	-16	29	-	-406	-34	-	-946	21	-
Net Income after Extraordinary Items	-801	254	-	-192	-12	-	-3	101	-	-609	14	-	-1607	357	-
Internal Cash Flow	941	1222	29.8	5	9	87.8	38	92	143.9	275	275	-	1259	1599	27.0

B4

Income and Expense Statement - All Operations in millions of dollars Senior Oil and Gas Producers

	Upstream			Downstream			Other Operations			Foreign Activities			Total Operations		
	1986	1987	Change %	1986	1987	Change %	1986	1987	Change %	1986	1987	Change %	1986	1987	Change %
Total Revenues	8389	8728	4.0	589	460	-21.8	728	651	-10.6	541	454	-16.1	10246	10294	0.5
Royalties and other Payments	1523	1504	-1.2	0	0	-	0	0	-	0	0	-	1523	1504	-1.2
PGRT and other Taxes	262	0	-100.0	2	0	-81.4	7	6	-14.8	36	32	-12.1	309	39	-87.5
Total Revenue after Royalties	6604	7224	9.4	586	460	-21.5	720	645	-10.5	505	422	-16.4	8415	8751	4.0
Cost of Goods Sold	0	0	-	286	177	-38.1	0	0	-	67	87	30.9	352	264	-25.1
Interest Expenses	1011	1057	4.5	17	15	-8.3	407	149	-63.4	37	15	-60.8	1472	1236	-16.1
Operating Costs	2253	2154	-4.4	181	156	-13.9	332	316	-4.9	165	96	-42.2	2931	2721	-7.2
R&D Costs (excluding Oil Sands)	33	31	-5.1	0	0	-100.0	1	0	-66.3	0	0	-	33	31	-6.4
Other Expenses	449	244	-45.7	0	2	-	94	71	-24.5	65	27	-58.6	607	343	-43.5
Oil Sands R&D Expensed	18	16	-15.2	0	0	-	0	0	-	0	0	-	18	16	-15.2
E&D Expensed	562	453	-19.5	0	0	-	3	14	317.6	1	9	-	566	476	-15.9
Depreciation	424	415	-2.0	41	46	11.7	144	107	-25.5	10	14	38.2	619	583	-5.9
Depletion	1111	887	-20.2	0	0	-	11	5	-52.4	323	117	-63.8	1445	1009	-30.1
Write-Offs and Amortization	293	558	90.5	-123	-2	-	-5	-51	-	24	-9	-	189	496	162.1
Non-cash Charges and E&D	2409	2329	-3.3	-81	44	-	153	75	-50.6	357	131	-63.3	2838	2580	-9.1
Income before Taxes	449	1409	214.0	184	67	-63.9	-266	34	-	-187	67	-	181	1576	-
Federal Income Tax	306	501	63.6	5	2	-60.7	-45	-16	-	32	24	-23.0	298	509	70.8
Provincial Income Tax	56	147	162.6	1	1	-24.8	-14	-6	-	0	0	-	43	142	227.6
Current Income Tax	362	648	79.0	7	3	-53.0	-59	-24	-	32	25	-22.4	342	651	90.8
Income after Current Income Tax	87	761	-	178	63	-64.3	-207	58	-	-218	42	-	-161	924	-
Deferred Income Tax	-12	4	-	-100	6	-	-95	10	-	-14	-3	-	-221	16	-
Net Income after Taxes	99	758	-	278	58	-79.2	-112	48	-	-205	45	-	60	908	-
Extraordinary Gains	-1538	119	-	0	0	-	-579	-0	-	-118	0	-	-2236	119	-
Net Income after Extraordinary Items	-1439	877	-	278	58	-79.2	-691	48	-	-323	45	-	-2176	1028	-
Internal Cash Flow	2496	3090	23.8	97	108	11.3	-54	133	-	139	173	24.7	2677	3504	30.9

B5

Income and Expense Statement - All Operations in millions of dollars Total Oil and Gas Producers

	Upstream			Downstream			Other Operations			Foreign Activities			Total Operations		
	1986	1987	Change %	1986	1987	Change %	1986	1987	Change %	1986	1987	Change %	1986	1987	Change %
Total Revenues	11682	12014	2.8	611	568	-6.9	1093	1030	-5.7	1553	1150	-25.9	14938	14762	-1.2
Royalties and other Payments	2189	2097	-4.2	0	0	-	0	0	-	0	0	-	2189	2097	-4.2
PGRT and Other Taxes	326	0	-100.0	2	1	-69.8	7	6	-6.2	87	89	3.0	421	96	-77.2
Total Revenue after Royalties	9167	9917	8.2	608	568	-6.7	1086	1024	-5.7	1466	1061	-27.6	12328	12569	2.0
Cost of Goods Sold	0	0	-	295	195	-33.8	2	1	-61.3	284	167	-41.3	581	363	-37.5
Interest Expenses	1704	1625	-4.7	17	15	-8.1	453	219	-51.7	90	27	-69.9	2264	1886	-16.7
Operating Costs	3008	2936	-2.4	186	234	25.6	574	485	-15.5	483	264	-45.2	4251	3919	-7.8
R&D Costs (excluding Oil Sands)	34	31	-8.4	0	0	-100.0	1	0	-55.7	0	0	62.3	35	32	-9.2
Other Expenses	686	437	-36.4	0	2	378.5	122	105	-13.7	102	59	-42.0	909	603	-33.7
Oil Sands R&D Expensed	19	15	-21.2	0	0	-	0	0	-	0	0	-	19	15	-21.2
E&D Expensed	634	517	-18.4	0	0	-	3	14	317.6	2	9	277.5	640	541	-15.5
Depreciation	584	602	3.1	43	53	25.1	172	131	-23.5	77	51	-34.3	876	838	-4.4
Depletion	1971	1547	-21.5	0	0	-	21	16	-23.1	626	296	-52.6	2618	1860	-28.9
Write-Offs and Amortization	626	563	-10.1	-94	-2	-	-16	-68	-	159	-5	-	676	487	-27.9
Non-cash Charges and E&D	3835	3245	-15.4	-51	51	-	181	94	-48.1	865	351	-59.4	4829	3741	-22.5
Income before Taxes	-100	1644	-	161	70	-56.7	-246	120	-	-357	192	-	-542	2026	-
Federal Income Tax	340	550	61.9	7	3	-57.6	-35	-6	-	94	95	0.9	405	641	58.3
Provincial Income Tax	-42	26	-	2	1	-29.3	-14	-5	-	0	0	-	-54	23	-
Current Income Tax	298	576	93.6	8	4	-51.1	-49	-11	-	94	95	1.1	351	664	89.2
Income after Current Income Tax	-398	1067	-	153	66	-57.0	-197	132	-	-451	97	-	-893	1362	-
Deferred Income Tax	-51	97	-	-100	5	-	-98	12	-	-43	4	-	-292	118	-
Net Income after Taxes	-346	971	-	253	60	-76.2	-99	120	-	-408	93	-	-600	1244	-
Extraordinary Gains	-1894	160	-	-167	-14	-	-595	28	-	-525	-34	-	-3182	140	-
Net Income after Extraordinary Items	-2241	1131	-	86	46	-45.9	-695	149	-	-932	59	-	-3782	1385	-
Internal Cash Flow	3437	4312	25.5	102	117	15.0	-16	225	-	414	448	8.3	3936	5103	29.6

B6

Income and Expense Statement - All Operations in millions of dollars Canadian-Controlled Companies

	Upstream			Downstream			Other Operations			Foreign Activities			Total Operations		
	1986	1987	Change %	1986	1987	Change %	1986	1987	Change %	1986	1987	Change %	1986	1987	Change %
Total Revenues	8229	8373	1.7	9217	9269	0.6	1921	1774	-7.7	1348	976	-27.6	20716	20393	-1.6
Royalties and other Payments	1431	1329	-7.2	0	0	-	0	0	-	0	0	-	1431	1329	-7.2
PGRT and other Taxes	185	0	-100.0	1008	1339	32.9	8	9	9.7	63	69	10.0	1264	1417	12.1
Total Revenue after Royalties	6613	7045	6.5	8210	7930	-3.4	1914	1766	-7.7	1285	907	-29.4	18021	17647	-2.1
Cost of Goods Sold	0	0	-	6134	5825	-5.0	892	937	5.1	284	167	-41.3	7310	6929	-5.2
Interest Expenses	1425	1234	-13.5	62	50	-18.4	532	289	-45.8	78	22	-72.0	2097	1594	-24.0
Operating Costs	2306	2136	-7.4	1158	1229	6.1	488	332	-32.0	414	211	-49.2	4367	3907	-10.5
R&D Costs (excluding Oil Sands)	10	6	-33.6	0	1	-	0	0	-34.7	0	0	62.3	10	8	-25.2
Other Expenses	614	367	-40.2	46	40	-14.5	74	99	34.9	88	43	51.6	822	549	-33.3
Oil Sands R&D Expensed	5	6	25.6	0	0	-	0	0	-	0	0	-	5	6	25.6
E&D Expensed	166	106	-36.1	0	0	-	-7	5	-	1	0	-59.1	159	111	-30.4
Depreciation	471	453	-3.8	309	315	2.1	189	137	-27.8	70	44	-37.4	1039	949	-8.7
Depletion	1663	1357	-18.4	0	0	-	18	13	-26.2	545	257	-52.8	2226	1628	-26.9
Write-Offs and Amortization	298	451	51.4	-79	27	-	-8	-112	-	123	-12	-	334	355	6.0
Non-cash Charges and E&D	2602	2373	-8.8	230	342	48.9	193	44	-77.4	738	289	-60.8	3763	3048	-19.0
Income before Taxes	-345	928	-	579	444	-23.4	-266	65	-	-317	176	-	-349	1612	-
Federal Income Tax	152	233	53.6	42	97	133.3	-70	-12	-	86	85	-1.5	209	403	92.8
Provincial Income Tax	-69	-42	-	3	9	204.2	-18	-5	-	0	0	-	-85	-38	-
Current Income Tax	82	191	132.6	44	106	137.9	-89	-17	-	86	85	-1.1	124	365	193.7
Income after Current Income Tax	-427	737	-	535	338	-36.8	-177	82	-	-403	91	-	-473	1248	-
Deferred Income Tax	-72	140	-	2	83	-	-64	-22	-	-30	8	-	-164	208	-
Net Income after Taxes	-355	597	-	532	255	-52.1	-113	104	-	-374	83	-	-309	1039	-
Extraordinary Gains	-1845	19	-	-163	2	-	-614	34	-	-529	-34	-	-3151	20	-
Net Income after Extraordinary Items	-2200	616	-	369	257	-30.4	-727	138	-	-903	48	-	-3460	1060	-
Internal Cash Flow	2175	3110	43.0	764	680	-11.1	16	126	-	335	380	13.4	3290	4296	30.6

B7

Income and Expense Statement - All Operations in millions of dollars Foreign-Controlled Companies

	Upstream			Downstream			Other Operations			Foreign Activities			Total Operations		
	1986	1987	Change %	1986	1987	Change %	1986	1987	Change %	1986	1987	Change %	1986	1987	Change %
Total Revenues	8760	9456	7.9	17264	18100	4.8	871	1019	17.0	319	365	14.4	27214	28940	6.3
Royalties and other Payments	1713	1714	0.1	0	0	-	0	0	-	0	0	-	1713	1714	0.1
PGRT and other Taxes	267	0	-100.0	1964	2620	33.4	13	13	-4.3	24	20	-15.7	2268	2652	16.9
Total Revenue after Royalties	6780	7741	14.2	15300	15481	1.2	858	1006	17.3	295	345	16.8	23233	24573	5.8
Cost of Goods Sold	0	0	-	11847	11734	-1.0	204	371	82.2	0	118	-	12051	12223	1.4
Interest Expenses	283	395	39.6	57	43	-23.7	311	235	-24.5	12	5	-55.5	664	679	2.4
Operating Costs	2429	2485	2.3	2031	2142	5.5	190	292	53.6	136	73	-46.2	4785	4992	4.3
R&D Costs (excluding Oil Sands)	62	56	-9.6	70	68	-2.4	11	3	-74.4	0	0	-	143	127	-11.0
Other Expenses	216	189	-12.4	8	-6	-	80	66	-17.4	14	17	20.6	318	266	-16.4
Oil Sands R&D Expensed	34	21	-37.9	0	0	-	0	0	-	0	0	-	34	21	-37.9
E&D Expensed	815	638	-21.8	0	0	-	35	30	-14.6	2	9	383.9	852	676	-20.6
Depreciation	416	463	11.3	389	400	2.8	54	78	44.6	9	9	2.0	868	950	9.4
Depletion	576	493	-14.3	0	0	-	3	3	-3.2	102	57	-43.4	681	554	-18.6
Write-Offs and Amortization	574	379	-33.9	4	-12	-	29	32	12.0	42	7	-84.2	648	407	-37.2
Non-cash Charges and E&D	2414	1994	-17.4	393	388	-1.2	120	143	18.4	154	82	-46.6	3082	2607	-15.4
Income before Taxes	1377	2622	90.5	894	1111	24.3	-59	-103	-	-21	49	-	2191	3679	67.9
Federal Income Tax	606	738	21.8	305	334	9.7	-214	-148	-	26	23	-11.5	723	947	31.1
Provincial Income Tax	86	202	136.7	70	111	57.4	-14	-40	-	0	0	-100.0	142	273	92.2
Current Income Tax	691	940	36.0	375	445	18.7	-228	-188	-	26	23	-11.5	865	1220	41.2
Income after Current Income Tax	685	1682	145.4	519	666	28.3	169	85	-49.9	-47	26	-	1326	2459	85.4
Deferred Income Tax	147	271	84.2	-6	25	-	99	20	-79.9	-12	1	-	228	317	39.0
Net Income after Taxes	538	1411	162.1	525	641	22.1	70	65	-7.2	-35	25	-	1098	2142	95.0
Extraordinary Gains	-124	142	-	-49	2	-	-159	30	-	0	0	-	-333	173	-
Net Income after Extraordinary Items	414	1553	274.9	475	643	35.3	-89	94	-	-35	25	-	765	2315	202.4
Internal Cash Flow	3100	3676	18.6	912	1054	15.6	290	227	-21.5	107	108	1.1	4408	5066	14.9

B8

Financial Performance for Main Business Segments Upstream Operations

	Total Industry			Canadian Controlled			Foreign Controlled		
	1986	1987	Change %	1986	1987	Change %	1986	1987	Change %
Production of Oil Equivalent in thousand of cubic metres	151645	160512	5.8	75300	78805	4.7	76345	81707	7.0
Key Financial Items in millions of dollars	%			%			%		
Gross Revenue	16990	17829	4.9	8229	8373	1.7	8760	9456	7.9
Cash Income	5275	6787	28.7	2175	3110	43.0	3100	3676	18.6
Net Income	184	2008	-	-355	597	-	538	1411	162.1
Net Income plus Interest	1892	3637	92.2	1071	1831	71.0	821	1807	119.9
Capital Employed	47242	50102	6.1	28487	30428	6.8	18755	19674	4.9
Unit Revenues and Costs in dollars per cubic metre	%			%			%		
Gross Revenue	112.04	111.08	-0.9	109.29	106.25	-2.8	114.75	115.73	0.9
Royalties and other Payments	20.74	18.96	-8.6	19.00	16.86	-11.3	22.44	20.98	-6.5
PGRT and other Taxes	2.98	0	-100.0	2.46	0	-100.0	3.50	0	-100.0
Revenues after Royalties and Taxes	88.32	92.12	4.3	87.83	89.39	1.8	88.81	94.75	6.7
Interest Expenses	11.27	10.15	-9.9	18.93	15.65	-17.3	3.71	4.84	30.5
Operating Costs (excluding Research)	31.22	28.79	-7.8	30.63	27.10	-11.5	31.81	30.41	-4.4
Research and other Expenses	5.94	3.85	-35.2	8.29	4.74	-42.8	3.63	3.00	-17.5
Cash Income before Taxes	39.89	49.33	23.7	29.98	41.90	39.7	49.65	56.50	13.8
E&D and Oil Sands R&D Expensed	6.72	4.80	-28.6	2.26	1.42	-37.3	11.11	8.06	-27.5
Depreciation	5.85	5.71	-2.5	6.26	5.75	-8.1	5.45	5.67	4.0
Depletion	14.76	11.53	-21.9	22.08	17.22	-22.0	7.54	6.04	-20.0
Write-offs	5.75	5.18	-10.0	3.96	5.73	44.7	7.51	4.64	-38.2
Net Income before Taxes	6.81	22.12	225.0	-4.58	11.78	-	18.03	32.09	78.0
Federal Income Tax	4.99	6.05	21.1	2.01	2.96	46.8	7.93	9.03	13.8
Provincial Income Tax	0.11	1.00	-	-0.92	-0.53	-	1.12	2.48	121.2
Deferred Income Tax	0.49	2.56	-	-0.96	1.77	-	1.93	3.32	72.1
Net Income after Taxes	1.21	12.51	-	-4.71	7.58	-	7.05	17.27	144.9
Extraordinary Gains	-12.99	1.00	-	-24.50	0.24	-	-1.63	1.73	-
Net Income after Extraordinary Items	-11.77	13.51	-	-29.21	7.82	-	5.42	19.00	250.3
Internal Cash Flow	34.79	42.28	21.6	28.89	39.47	36.6	40.60	44.99	10.8
Ratios in per cent									
Natural Gas as a percent of Total Production	41.8	43.3	n/a	47.2	48.3	n/a	36.5	38.4	n/a
Oil Subject to Old Oil Royalty as a percent of Conventional Oil Production	51.0	48.2	n/a	49.3	44.9	n/a	52.4	50.9	n/a

B8 (continued)**Financial Performance for Main Business Segments**
Upstream Operations

	Integrated/Refiners			Junior O&G Producers			Senior O&G Producers		
	1986	1987	Change %	1986	1987	Change %	1986	1987	Change %
Production of Oil Equivalent in thousand of cubic metres	50245	51538	2.6	31594	34923	10.5	69806	74052	6.1
Key Financial Items in millions of dollars			%			%			%
Gross Revenue	5308	5815	9.6	3293	3285	-0.2	8389	8728	4.0
Cash Income	1838	2474	34.6	941	1222	29.8	2496	3090	23.8
Net Income	530	1038	95.8	-445	213	-	99	758	-
Net Income plus Interest	534	1042	95.1	248	781	214.6	1110	1815	63.5
Capital Employed	12297	13220	7.5	14318	13882	-3.0	20627	23000	11.5
Unit Revenues and Costs in dollars per cubic metres			%			%			%
Gross Revenue	105.64	112.84	6.8	104.23	94.07	-9.7	120.17	117.87	-1.9
Royalties and other Payments	19.01	18.36	-3.4	21.10	16.97	-19.5	21.81	20.31	-6.9
PGRT and other Taxes	2.52	0	-100.0	2.00	0	-100.0	3.76	0	-100.0
Revenues after Royalties and Taxes	84.11	94.48	12.3	81.13	77.10	-5.0	94.60	97.56	3.1
Interest Expenses	0.08	0.08	3.8	21.94	16.26	-25.9	14.49	14.27	-1.5
Operating Costs (excluding Research)	34.36	32.68	-4.9	23.90	22.38	-6.3	32.28	29.09	-9.9
Research and other Expenses	3.62	2.93	-19.0	7.53	5.52	-26.7	6.90	3.71	-46.2
Cash Income before Taxes	46.05	58.78	27.6	27.76	32.94	18.7	40.94	50.48	23.3
E&D and Oil Sands R&D Expensed	7.28	4.61	-36.6	2.30	1.83	-20.4	8.32	6.32	-24.0
Depreciation	6.03	6.09	1.0	5.07	5.35	5.5	6.07	5.61	-7.7
Depletion	5.33	5.88	10.4	27.21	18.90	-30.5	15.92	11.98	-24.7
Write-offs	4.89	5.20	6.4	10.55	0.14	-98.7	4.20	7.54	79.6
Net Income before Taxes	22.53	37.00	64.2	-17.37	6.72	-	6.43	19.03	196.0
Federal Income Tax	8.31	8.16	-1.8	1.07	1.41	32.3	4.38	6.76	54.3
Provincial Income Tax	1.16	2.61	125.7	-3.10	-3.46	-	0.80	1.99	147.5
Deferred Income Tax	2.51	6.09	142.5	-1.25	2.67	-	-0.17	0.05	-
Net Income after Taxes	10.55	20.14	90.9	-14.09	6.09	-	1.41	10.23	-
Extraordinary Gains	-1.49	0.00	-	-11.28	1.17	-	-22.04	1.61	-
Net Income after Extraordinary Items	9.07	20.14	122.1	-25.37	7.27	-	-20.62	11.85	-
Internal Cash Flow	36.58	48.01	31.2	29.79	34.99	17.4	35.75	41.73	16.7
Ratios in percent									
Natural Gas as a percent of Total Production	27.9	30.5	n/a	59.9	60.3	n/a	43.6	44.1	n/a
Oil Subject to Old Oil Royalty as a percent of Conventional Oil Production	49.6	48.4	n/a	40.0	33.7	n/a	56.4	54.0	n/a

B9

Financial Performance for Main Business Segments Downstream Operations

	Total Downstream			Petro-Chemicals and Other			Total Oil Products Operations ⁽¹⁾				
	1986	1987	Change	1986	1987	Change	1986	1987	Change	1986	1987
	\$ millions		%	\$ millions		%	\$ millions		%	\$/m ³	
Total Revenue	26481	27369	3.4	2932	3170	8.1	23549	24200	2.8	294.89	291.98
Sales, Excise and other Taxes	2972	3959	33.2	3	2	-30.1	2969	3957	33.3	37.18	47.74
Cost of Goods Sold	17982	17559	-2.4	2199	2084	-5.2	15782	15474	-2.0	197.63	186.71
Operating Costs	3189	3371	5.7	376	442	17.6	2813	2929	4.1	35.23	35.34
R&D Costs (excluding Oil Sands)	70	69	-1.5	26	18	-31.4	44	51	16.6	0.55	0.61
Other Expenses	54	33	-39.0	0	6	-	54	27	-50.6	0.68	0.32
Cash Income before Interest and Taxes	2214	2379	7.4	328	617	88.1	1887	1762	-6.6	23.62	21.26
Interest Expenses	119	94	-21.0	24	21	-11.9	94	72	-23.3	1.18	0.87
Cash Income before Taxes	2096	2285	9.0	304	595	96.1	1792	1689	-5.7	22.44	20.38
Current Income Tax	420	551	31.3	49	167	238.7	370	384	3.7	4.64	4.63
Internal Cash Flow	1676	1734	3.4	254	428	68.5	1422	1305	-8.2	17.80	15.75
Depreciation and other Non-cash Charges	623	730	17.3	92	201	119.1	531	529	-0.4	6.65	6.38
Income after Current Income Tax	1053	1004	-4.7	162	227	39.8	891	777	-12.9	11.16	9.37
Deferred Income Tax	-4	108	-	-132	-25	-	128	133	4.1	1.60	1.60

	National Refiners-Marketers			Regional Refiners-Marketers		
	1986	1987	Change	1986	1987	Change
	\$/m ³		%	\$/m ³		%
Total Revenue	297.63	296.24	-0.5	287.93	281.22	-2.3
Sales, Excise and other Taxes	38.60	48.89	26.7	33.58	44.86	33.6
Cost of Goods Sold	197.25	188.59	-4.4	198.59	181.95	-8.4
Operating Costs	38.28	38.41	0.3	27.48	27.57	0.3
R&D Costs (excluding Oil Sands)	0.70	0.80	14.8	0.16	0.13	-13.9
Other Expenses	0.23	0.18	-	1.81	1.60	-11.6
Cash Income before Interest and Taxes	22.57	19.73	-12.6	26.31	25.11	-4.5
Interest Expenses	0.01	0.00	-67.8	4.16	3.08	-26.0
Cash Income before Taxes	22.56	19.73	-12.5	22.15	22.04	-0.5
Current Income Tax	5.53	4.74	-14.4	2.36	4.37	85.2
Internal Cash Flow	17.02	14.99	-11.9	19.79	17.67	-10.7
Depreciation and other Non-cash Charges	6.30	5.84	-7.4	7.52	7.75	3.1
Income after Current Income Tax	10.72	9.15	-14.6	12.27	9.91	-19.2
Deferred Income Tax	1.50	1.39	-7.7	1.85	2.16	16.5
Net Income after Taxes	9.22	7.77	-15.7	10.42	7.75	-25.6
Ratios in percent	Change			Change		
'Clean Products' Sales as a percent of Total Sales Volume	81.78	81.40	-0.5	81.30	82.04	0.9
Net Sales in Canada as a percent of Total Sales Volume	92.19	91.83	-0.4	90.10	88.97	-1.3
Export Sales as a percent of Total Sales Volume	5.73	6.19	8.1	8.87	10.07	13.5

(1) The calculation of unit costs and revenues is based on total sales volume data for the aggregates mentioned.

B10

Sources and Uses of Funds in millions of dollars

	Total Industry			Canadian Controlled			Foreign Controlled		
	1986	1987	Change %	1986	1987	Change %	1986	1987	Change %
Cash Generated by Operations	7698	9362	21.6	3290	4296	30.6	4408	5066	14.9
Net Increase in Long-term Debt	1900	876	-53.9	1526	684	-55.2	373	192	-48.4
Issue of Shares	2414	1849	-23.4	1818	1301	-28.5	595	548	-7.9
Grants (PIP and others)	1149	491	-57.3	956	341	-64.3	193	150	-22.4
All Other Sources	5108	7488	46.6	3489	6096	74.7	1619	1391	-14.1
Working Capital Decrease	3333	2000	-40.0	1748	828	-52.6	1585	1172	-26.1
Total Sources of Funds	21601	22066	2.2	12827	13546	5.6	8774	8520	-2.9
Total Capital Expenditures in Canada	7372	7007	-5.0	4079	3657	-10.3	3294	3350	1.7
Capital Expenditure in U.S.A.	145	150	3.5	123	94	-23.6	22	56	156.5
Other Foreign Capital Expenditures	425	346	-18.7	389	321	-17.6	36	25	-30.5
Total Foreign Capital Expenditures	570	495	-13.0	512	415	-19.0	58	81	39.9
Total Company Capital Expenditures	7942	7503	-5.5	4590	4071	-11.3	3352	3431	2.4
Dividends:									
Common Shares	2260	1191	-47.3	323	293	-9.4	1937	898	-53.6
Preferred Shares	313	345	10.4	270	201	-25.5	43	144	238.8
Total	2573	1536	-40.3	593	494	-16.7	1980	1042	-47.3
Reduction of Equity	452	323	-28.6	71	119	67.5	381	204	-46.5
Total Dividend and Equity Reduction	3025	1859	-38.6	664	613	-7.8	2361	1246	-47.2
Net Decrease in Long-term Debt	2931	4429	51.1	1474	2795	89.6	1457	1634	12.1
All Other Applications	6783	6238	-8.0	5681	4665	-17.9	1102	1573	42.8
Working Capital Increase	920	2037	121.4	418	1402	235.5	502	635	26.5
Total Applications of Funds	21601	22066	2.2	12827	13546	5.6	8774	8520	-2.9

	Integrated/Refiners			Junior O&G Producers			Senior O&G Producers		
	1986	1987	Change %	1986	1987	Change %	1986	1987	Change %
Cash Generated by Operations	3762	4259	13.2	1259	1599	27.0	2677	3504	30.9
Net Increase in Long-term Debt	540	20	-96.3	341	605	77.2	1019	251	-75.3
Issue of Shares	24	281	-	1851	1251	-32.4	539	317	-41.2
Grants (PIP and others)	372	129	-65.5	328	190	-41.9	449	172	-61.7
All Other Sources	541	885	63.5	1505	1242	-17.5	3062	5361	75.1
Working Capital Decrease	775	224	-71.0	350	974	178.3	2208	802	-63.7
Total Sources of Funds	6013	5797	-3.6	5634	5861	4.0	9954	10408	4.6
Total Capital Expenditures in Canada	2683	2470	-7.9	1708	1950	14.2	2981	2587	-13.2
Capital Expenditure in U.S.A.	0	0	-	50	25	-51.2	95	125	32.4
Other Foreign Capital Expenditures	22	19	12.9	349	274	-21.4	55	53	-3.4
Total Foreign Capital Expenditures	22	19	-11.9	399	299	-25.2	149	178	19.3
Total Company Capital Expenditures	2705	2489	-8.0	2107	2249	6.7	3130	2765	-11.7
Dividends:									
Common Shares	619	607	-1.9	42	55	32.3	1600	529	-66.9
Preferred Shares	113	188	67.0	100	101	0.3	100	57	-43.3
Total	731	795	8.7	142	156	9.7	1700	585	-65.6
Reduction of Equity	168	92	-45.2	89	181	103.3	196	50	-74.4
Total Dividend and Equity Reduction	899	887	-1.3	231	336	45.7	1896	636	-66.5
Net Decrease in Long-term Debt	768	495	-35.6	1640	1328	-19.0	522	2606	398.8
All Other Applications	1410	1499	6.3	1170	1291	10.4	4203	3447	-18.0
Working Capital Increase	231	427	84.6	487	657	34.9	202	954	371.6
Total Applications of Funds	6013	5797	-3.6	5634	5861	4.0	9954	10408	4.6

B11

Upstream Canadian Capital Expenditures by Location in millions of dollars

	Total Canadian			Provinces			Canada Lands		
	1986	1987	Change %	1986	1987	Change %	1986	1987	Change %
Total Industry									
Land and Lease, Geological and Geophysical	1075	1336	24.3	993	1290	29.9	83	46	-43.7
Exploration Drilling	2198	1365	-37.9	1062	1002	-5.7	1136	363	-68.0
Total Exploration	3273	2701	-17.5	2055	2291	11.5	1218	410	-66.4
Development Drilling	1048	1007	-3.8	1030	981	-4.8	17	27	53.1
Production	1352	1237	-8.5	1344	1207	-10.2	8	30	286.9
Non-conventional Heavy Oil and Oil Sands	601	548	-8.9	601	548	-8.9	0	0	-
Total Upstream	6274	5493	-12.4	5030	5027	-0.1	1243	467	-62.5
Canadian-Controlled Companies									
Land and Lease, Geological and Geophysical	581	687	18.4	535	671	25.4	45	16	-64.7
Exploration Drilling	1617	900	-44.4	621	573	-7.7	996	326	-67.2
Total Exploration	2198	1587	-27.8	1156	1245	7.6	1041	342	-67.1
Development Drilling	568	510	-10.2	566	510	-9.8	3	0	-97.1
Production	633	550	-13.1	632	549	-13.1	2	2	8.7
Non-conventional Heavy Oil and Oil Sands	203	194	-4.5	203	194	-4.5	0	0	-
Total Upstream	3602	2842	-21.1	2557	2497	-2.3	1046	344	-67.1
Foreign-Controlled Companies									
Land and Lease, Geological and Geophysical	495	649	31.1	458	618	35.1	37	30	-18.0
Exploration Drilling	581	465	-19.9	441	428	-2.9	140	37	-73.5
Total Exploration	1076	1114	3.6	899	1047	16.4	177	67	-61.9
Development Drilling	479	497	3.7	464	470	1.3	15	27	79.2
Production	719	687	-4.4	712	658	-7.6	6	28	361.9
Non-conventional Heavy Oil and Oil Sands	398	354	-11.1	398	354	-11.1	0	0	-
Total Upstream	2672	2652	-0.8	2474	2529	2.2	198	122	-38.2

B12

Capital Expenditures by Activity in millions of dollars

	Total Industry			Canadian Controlled			Foreign Controlled		
	1986	1987	Change %	1986	1987	Change %	1986	1987	Change %
Exploration	3273	2701	-17.5	2198	1587	-27.8	1076	1114	3.6
Development	1048	1007	-3.8	568	510	-10.2	479	497	3.7
Production	1352	1237	-8.5	633	550	-13.1	719	687	-4.4
Oil Sands	601	548	-8.9	203	194	-4.5	398	354	-11.1
Total Upstream	6274	5493	-12.4	3602	2842	-21.1	2672	2652	-0.8
Total Downstream	796	1172	47.2	338	654	93.8	458	518	12.9
Uranium	0	0	-72.7	0	0	-	0	0	-72.7
Coal	25	14	-42.2	1	5	312.9	23	9	-61.6
All Others	278	328	18.1	138	156	13.2	140	172	23.0
Total Capital Expenditures in Canada	7372	7007	-5.0	4079	3657	-10.3	3294	3350	1.7
Total Capital Expenditures Abroad	570	495	-13.0	512	415	-19.0	58	81	39.9
Total Company Capital Expenditures	7942	7503	-5.5	4590	4071	-11.3	3352	3431	2.4

	Integrated/Refiners			Junior O&G Producers			Senior O&G Producers		
	1986	1987	Change %	1986	1987	Change %	1986	1987	Change %
Exploration	891	598	-32.9	927	899	-3.1	1455	1205	-17.2
Development	281	266	-5.5	346	332	-3.9	421	410	-2.6
Production	327	383	17.2	340	343	0.9	685	511	-25.4
Oil Sands	338	342	1.1	54	5	-90.2	209	200	-4.1
Total Upstream	1837	1589	-13.5	1667	1579	-5.3	2769	2325	-16.0
Total Downstream	682	774	13.5	5	299	-	109	99	-9.0
Uranium	0	0	-100.0	0	0	-	0	0	-
Coal	23	8	-65.4	0	0	-	1	6	379.2
All Others	141	100	-29.0	35	72	103.1	102	156	53.8
Total Capital Expenditures in Canada	2683	2470	-7.9	1708	1950	14.2	2981	2587	-13.2
Total Capital Expenditures Abroad	22	19	-11.9	399	299	-25.2	149	178	19.3
Total Company Capital Expenditures	2705	2489	-8.0	2107	2249	6.7	3130	2765	-11.7

B13

Balance Sheet in millions of dollars

	Total Industry			Canadian Controlled			Foreign Controlled		
	1986	1987	Change %	1986	1987	Change %	1986	1987	Change %
Cash, Investments and Marketable Securities	4439	5208	17.3	1865	2571	37.9	2574	2637	2.5
Accounts Receivable:									
Affiliate	374	446	19.3	106	135	27.1	267	311	16.3
All Other	6249	6366	1.9	3344	3150	-5.8	2905	3216	10.7
Total	6623	6813	2.9	3451	3285	-4.8	3172	3527	11.2
Inventories	3846	4265	10.9	1537	1724	12.1	2309	2541	10.1
Other Current Assets	680	767	12.8	325	412	26.8	355	356	0.1
Total Current Assets	15588	17054	9.4	7178	7992	11.3	8410	9062	7.7
Property Plant and Equipment	86706	94605	9.1	49481	54919	11.0	37224	39687	6.6
Less:									
Accumulated Depletion									
Depreciation and Amortization	27524	30023	9.1	16344	17456	6.8	11179	12567	12.4
Net Fixed Assets	61765	64384	4.2	35929	37471	4.3	25836	26913	4.2
Other Long-term Assets	8189	5646	-31.1	6065	3419	-43.6	2124	2226	4.8
Total Assets	85543	87083	1.8	49172	48882	-0.6	36371	38201	5.0
Accounts Payable:									
Affiliate	571	424	-25.7	151	63	-58.1	420	361	-14.0
All Other	5962	6798	13.8	3128	3290	5.2	2835	3498	23.4
Total	6534	7212	10.4	3279	3353	2.2	3254	3859	18.6
Current Portion of Long-term Debt	1292	1768	36.8	701	650	-7.4	591	1118	89.4
Other Current Liabilities	2463	2861	16.2	1430	1689	18.1	1033	1172	13.5
Total Current Liabilities	10289	11842	15.1	5411	5692	5.2	4878	6150	26.1
Long-term Debt	24001	20629	-14.0	17661	15743	-10.9	6340	4886	-22.9
Prepayment for Deferred Production	2055	1743	-15.2	1116	936	-16.2	939	807	-14.0
Accumulated Deferred Income Taxes	11254	11724	4.2	5872	6052	3.1	5382	5671	5.4
Other Long-term Liabilities	3217	3369	4.7	1582	1418	-10.4	1635	1951	19.3
Equity:									
Common Shares	13228	15728	18.9	9803	12025	22.7	3426	3703	8.1
Preferred Shares	4921	5242	6.5	4203	4449	5.9	718	793	10.4
Retained Earnings	11961	12050	0.7	720	-238	-	11241	12289	9.3
Other Equity	4617	4757	3.0	2805	2806	-	1811	1951	7.7
Total Equity	34727	37777	8.8	17531	19041	8.6	17196	18736	9.0
Total Liability, Deferred Taxes and Equity	85543	87083	1.8	49172	48882	-0.6	36371	38201	5.0
Working Capital	5299	5212	-1.6	1767	2300	30.2	3532	2912	-17.6
	Integrated/Refiners			Junior O&G Producers			Senior O&G Producers		
Cash, Investments and Marketable Securities	2140	2140	-	1008	1238	22.7	1290	1831	41.9
Accounts Receivable:									
Affiliate	53	42	-21.3	102	151	47.5	218	253	16.1
All Other	3511	3641	3.7	936	952	1.7	1803	1774	-1.6
Total	3564	3683	3.3	1038	1103	6.2	2021	2027	0.3
Inventories	3113	3527	13.3	140	143	2.5	594	595	0.2
Other Current Assets	523	603	15.2	73	100	36.2	83	65	-22.5
Total Current Assets	9340	9953	6.6	2259	2583	14.3	3988	4517	13.3
Property Plant and Equipment	33713	35796	6.2	20783	22947	10.4	32209	35863	11.3
Less:									
Accumulated Depletion									
Depreciation and Amortization	10552	11760	11.5	6190	7146	15.4	10782	11117	3.1
Net Fixed Assets	22963	23828	3.8	14676	15810	7.7	24127	24746	2.6
Other Long-term Assets	1721	2122	23.3	1453	1377	-5.3	5015	2147	-57.2
Total Assets	34024	35903	5.5	18388	19769	7.5	33130	31411	-5.2
Accounts Payable:									
Affiliate	381	200	-47.6	142	165	15.8	40	60	24.9
All Other	3294	3493	6.1	936	995	6.3	1733	2299	32.7
Total	3675	3693	0.5	1078	1160	7.6	1781	2359	32.4
Current Portion of Long-term Debt	162	361	121.9	590	1164	97.1	539	244	-54.8
Other Current Liabilities	1035	1315	27.0	651	675	3.7	776	872	12.3
Total Current Liabilities	4872	5368	10.2	2320	2999	29.3	3096	3474	12.2
Long-term Debt	3384	2899	-14.3	6644	6219	-6.4	13973	11511	-17.6
Prepayment for Deferred Production	453	391	-13.7	553	487	-12.0	1048	864	-17.6
Accumulated Deferred Income Taxes	5356	5759	7.5	1660	1717	3.4	4238	4247	0.2
Other Long-term Liabilities	1550	1691	9.1	738	699	-5.2	929	979	5.4
Equity:									
Common Shares	5993	6750	12.6	3518	4585	30.3	3717	4393	18.2
Preferred Shares	1988	1896	-4.6	1958	2002	2.2	975	1344	37.9
Retained Earnings	9976	10793	8.2	-1194	-967	-	3179	2224	-30.0
Other Equity	451	356	-21.1	2192	2028	-7.5	1974	2374	20.3
Total Equity	18408	19794	7.5	6473	7648	18.1	9846	10335	5.0
Total Liability, Deferred Taxes and Equity	34024	35903	5.5	18388	19769	7.5	33130	31411	-5.2
Working Capital	4468	4585	2.6	-60	-416	-	892	1043	17.0

B14**Capital Employed by Sector and Segment** in millions of dollars

	Total Industry			Canadian Controlled			Foreign Controlled		
	1986	1987	Change %	1986	1987	Change %	1986	1987	Change %
Upstream	47242	50102	6.1	28487	30428	6.8	18755	19674	4.9
Refining and Marketing	10581	11410	7.8	4572	5085	11.2	6009	6325	5.2
Other Downstream	2987	3317	11.0	1122	1500	33.7	1866	1817	-2.6
Other Canadian Operations	11024	7561	-31.4	7605	3992	-47.5	3420	3569	4.4
Total Canadian Operations	71835	72389	0.8	41785	41004	-1.9	30050	31385	4.4
Foreign Operations	3180	2852	-10.3	2544	2186	-14.1	636	666	4.7
Grand Total	75015	75242	0.3	44329	43191	-2.6	30686	32051	4.4

	Integrators/Refiners			Junior O&G Producers			Senior O&G Producers		
	1986	1987	Change %	1986	1987	Change %	1986	1987	Change %
Upstream	12297	13220	7.5	14318	13882	-3.0	20627	23000	11.5
Refining and Marketing	10588	11055	4.4	4	329	-	-11	26	-
Other Downstream	2323	2476	6.6	98	148	51.5	566	693	22.3
Other Canadian Operations	3557	3396	-4.5	1031	1238	20.1	6436	2927	-54.5
Total Canadian Operations	28766	30146	4.8	15451	15597	0.9	27618	26646	-3.5
Foreign Operations	389	389	-	1363	1173	-14.0	1428	1291	-9.6
Grand Total	29154	30535	4.7	16814	16770	-0.3	29046	27936	-3.8

Note:

Capital employed is defined as total assets less current liabilities.

B15

Volume and Value of Production By Province

Volume in thousands of cubic metres	Alberta			British Columbia			Saskatchewan		
	1986	1987	Change %	1986	1987	Change %	1986	1987	Change %
Conventional Crude - NORP	22504.7	24278.3	7.9	786.8	883.8	12.3	6013.4	6726.9	11.9
Conventional Crude - Other	28061.2	27001.0	-3.8	1063.6	1087.2	2.2	2879.4	2984.0	3.6
Conventional Crude Oil	50565.9	51279.3	1.4	1850.4	1970.9	6.5	8892.8	9710.9	9.2
Oil Sands	15091.8	15519.3	2.8	0.0	0.0	-	9.5	1.0	-89.5
Marketable Natural Gas (10 ⁶ m ³)	55896.1	60405.0	8.1	5567.8	6974.2	25.3	1458.5	1759.2	20.6
Gas Plant Liquids	14819.5	15691.0	5.9	254.0	322.6	27.0	8.5	35.9	322.8
Total	121553.8	127203.6	4.6	7418.2	8945.1	20.6	10360.8	11471.1	10.7

Value in millions of dollars									
			%			%			%
Conventional Crude - NORP	2665.0	3381.5	26.9	103.7	125.3	20.8	591.4	804.9	36.1
Conventional Crude - Other	3357.9	3854.2	14.8	131.2	155.5	18.6	307.8	383.0	24.4
Conventional Crude Oil	6022.8	7235.8	20.1	234.8	280.8	19.6	899.1	1187.9	32.1
Oil Sands	1603.7	2032.3	26.7	0.0	0.0	-	0.6	0.1	-82.0
Marketable Natural Gas	4502.5	3622.9	-19.5	349.0	362.6	3.9	94.3	94.6	0.4
Gas Plant Liquids	1793.7	1436.2	-19.9	22.8	26.8	17.6	0.8	3.8	-
Total	13922.6	14327.2	-2.9	606.6	670.2	10.5	994.8	1286.4	29.3

By Company Group

Volume in thousands of cubic metres	Total Industry			Canadian Controlled			Foreign Controlled		
	1986	1987	Change %	1986	1987	Change %	1986	1987	Change %
Conventional Crude - NORP	31086.8	33794.6	8.7	14624.5	16256.3	11.2	16462.3	17538.3	6.5
Conventional Crude - Other	32329.0	31413.4	-2.8	14229.3	13258.2	-6.8	18099.7	18155.2	0.3
Conventional Crude Oil	63415.8	65208.0	2.8	28853.8	29514.5	2.3	34562.0	35693.5	3.3
Oil Sands	15101.3	15520.3	2.8	4883.3	5050.6	3.4	10218.0	10469.7	2.5
Marketable Natural Gas (10 ⁶ m ³)	63345.0	69452.2	9.6	35506.0	38087.2	7.3	27839.0	31365.0	12.7
Gas Plant Liquids	15089.0	16056.5	6.4	9421.7	9602.7	1.9	5667.3	6453.8	13.9
Total	141862.2	150180.5	5.9	69243.1	72652.3	4.9	72619.0	77528.2	6.8

Value in millions of dollars									
			%			%			%
Conventional Crude - NORP	3499.7	4503.9	28.7	1596.0	2138.0	34.0	1903.7	2365.9	24.3
Conventional Crude - Other	3836.6	4441.8	15.8	1651.0	1830.3	10.9	2185.6	2611.5	19.5
Conventional Crude Oil	7336.3	8945.7	21.9	3247.0	3968.3	22.2	4089.3	4977.4	21.7
Oil Sands	1604.3	2032.4	26.7	586.4	753.1	28.4	1017.9	1279.3	25.7
Marketable Natural Gas	4986.2	4105.0	-17.7	2770.5	2202.6	-20.5	2215.6	1902.3	-14.1
Gas Plant Liquids	1818.0	1467.7	-19.3	1231.9	866.7	-29.6	586.1	601.0	2.5
Total	15744.8	16550.8	5.1	7835.9	7790.7	-0.6	7908.9	8760.1	10.8

Volume in thousands of cubic metres	Integrated/Refiners			Junior O&G Producers			Senior O&G Producers		
	1986	1987	Change %	1986	1987	Change %	1986	1987	Change %
Conventional Crude - NORP	10928.4	10895.8	-0.3	7156.2	8570.4	19.8	13002.2	14328.4	10.2
Conventional Crude - Other	10755.7	10232.9	-4.9	4763.0	4359.8	-8.5	16810.3	16820.7	0.1
Conventional Crude Oil	21684.1	21128.7	-2.6	11919.2	12930.2	8.5	29812.5	31149.1	4.5
Oil Sands	10147.7	10289.6	1.4	194.5	205.0	5.4	4759.1	5025.7	5.6
Marketable Natural Gas (10 ⁶ m ³)	14007.0	15739.5	12.4	18928.5	21073.1	11.3	30409.5	32639.6	7.3
Gas Plant Liquids	6212.8	6240.0	0.4	1584.6	1900.4	19.9	7291.6	7916.1	8.6
Total	45838.8	47157.8	2.9	31042.2	34208.3	10.2	64981.1	68814.4	5.9

Value in millions of dollars									
			%			%			%
Conventional Crude - NORP	1160.5	1411.0	21.6	818.7	1115.8	36.3	1520.6	1977.1	30.0
Conventional Crude - Other	1290.6	1481.5	14.8	549.8	577.5	5.0	1996.2	2382.8	19.4
Conventional Crude Oil	2451.1	2892.5	18.0	1368.5	1693.3	23.7	3516.7	4359.9	24.0
Oil Sands	1023.3	1274.0	24.5	13.8	21.8	58.8	567.2	736.6	29.9
Marketable Natural Gas	1092.3	960.0	-12.1	1465.5	1164.5	-20.5	2428.4	1980.5	-18.4
Gas Plant Liquids	575.9	538.1	-6.6	144.0	148.6	3.2	1098.1	780.9	-28.9
Total	5142.6	5664.7	10.2	2991.8	3028.2	1.2	7610.4	7857.9	3.3

B16

Upstream Operating Costs and Royalties in millions of dollars By Province

	Alberta			British Columbia			Saskatchewan		
	1986	1987	Change %	1986	1987	Change %	1986	1987	Change %
Field, Well and Gathering Operations	1819.7	1777.1	-2.3	89.7	86.1	-4.1	280.6	278.2	-0.8
Natural Gas Processing Plants	431.7	424.7	-1.6	6.4	7.2	12.8	11.7	13.2	13.1
Oil Sands	1110.8	1095.7	-1.4	0.0	0.0	-	1.1	0.2	-77.8
Taxes (excluding Income Taxes)	113.2	97.6	-13.8	3.8	3.1	-20.2	11.8	12.9	9.2
Operating Overhead	752.1	696.3	-7.4	18.5	15.1	-18.3	62.5	56.6	-9.3
Total Operating Cost	4227.5	4091.5	-3.2	118.4	111.5	-5.9	367.6	361.2	-1.7
Federal Crown Royalties	0.0	0.0	-	0.0	0.0	-	0.0	0.0	-
Provincial Royalties and Taxes	2301.0	2146.2	-6.7	93.3	100.4	7.6	171.4	250.2	46.0
Non-Crown Royalties and Other	497.7	434.9	-12.6	9.2	17.8	92.1	45.0	64.3	43.1
Total Royalties	2798.7	2581.1	-7.8	102.6	118.2	15.2	216.3	314.5	45.4

By Company Group

	Total Industry			Canadian Controlled			Foreign Controlled		
	1986	1987	Change %	1986	1987	Change %	1986	1987	Change %
Field, Well and Gathering Operations	2234.5	2194.8	-1.8	1137.3	1096.4	-3.6	1097.2	1098.4	0.1
Natural Gas Processing Plants	473.1	468.2	-1.0	305.5	269.8	-11.7	167.5	198.4	18.4
Oil Sands	1111.9	1096.0	-1.4	435.7	432.5	-0.7	676.2	663.4	-1.9
Taxes (excluding Income Taxes)	129.4	114.9	-11.2	71.3	56.1	-21.3	58.1	58.8	1.3
Operating Overhead	857.5	808.7	-5.7	366.2	287.2	-21.6	491.3	521.5	6.1
Total Operating Cost	4806.4	4682.6	-2.6	2316.1	2142.1	-7.5	2490.3	2540.5	2.0
Federal Crown Royalties	5.2	6.8	29.3	0.4	1.1	161.9	4.8	5.7	17.7
Provincial Royalties and Taxes	2575.7	2507.3	-2.7	1163.7	1064.8	-8.5	1412.0	1442.5	2.2
Non-Crown Royalties and Other	562.1	528.9	-5.9	264.2	262.6	-0.6	297.9	266.2	-10.6
Total Royalties	3143.0	3042.9	-3.2	1428.3	1328.5	-7.0	1714.7	1714.3	-

	Integrators/Refiners			Junior O&G Producers			Senior O&G Producers		
	1986	1987	Change %	1986	1987	Change %	1986	1987	Change %
Field, Well and Gathering Operations	592.0	611.5	3.3	546.2	564.5	3.3	1096.3	1018.8	-7.1
Natural Gas Processing Plants	126.3	123.1	-2.5	73.2	71.7	-2.1	273.6	273.4	-0.1
Oil Sands	679.3	669.1	-1.5	13.8	12.4	-10.2	418.7	414.4	-1.0
Taxes (excluding Income Taxes)	54.6	34.0	-37.8	17.3	19.2	10.8	57.5	61.8	7.5
Operating Overhead	311.9	277.8	-10.9	105.7	113.9	7.8	439.9	417.0	-5.2
Total Operating Cost	1764.1	1715.6	-2.7	756.3	781.7	3.4	2286.0	2185.4	-4.4
Federal Crown Royalties	3.5	4.8	37.1	0.4	1.1	161.9	1.3	0.9	-34.4
Provincial Royalties and Taxes	742.6	743.8	0.2	491.8	440.4	-10.5	1341.2	1323.1	-1.4
Non-Crown Royalties and Other	209.3	197.6	-5.6	172.8	151.2	-12.5	180.1	180.1	-
Total Royalties	955.4	946.2	-1.0	665.0	592.7	-10.9	1522.6	1504.0	-1.2

B17

Income and Expense Statement: 1983 - 1987 in millions of dollars

	1983	1984	Upstream		1987	Growth Rate	1983	1984	Downstream		1987	Growth Rate
			1985	1986					1985	1986		
Total Revenues	23834	26535	27968	16923	17719	- 7.1	30660	31882	34076	26481	27369	- 2.8
Royalties and other Payments	6080	6442	6346	3127	3017	- 16.1	0	0	0	0	0	-
PGRT and other Taxes	2025	2233	2010	452	0	-	1777	1935	2314	2972	3959	22.2
Total Revenue after Royalties	15730	17860	19611	13344	14702	- 1.7	28883	29948	31762	23510	23410	- 5.1
Cost of Goods Sold	0	0	0	0	0	-	25351	25568	26976	17982	17559	- 8.8
Interest Expenses	1407	1624	1574	1701	1619	3.6	298	361	201	119	94	- 25.1
Operating Costs	3732	4267	4816	4719	4585	5.3	2677	2714	3252	3189	3371	5.9
R&D Costs (excluding Oil Sands)	51	64	68	71	62	5.3	62	68	80	70	69	2.7
Other Expenses	578	560	600	830	556	- 1.0	189	175	43	54	33	- 35.2
Oil Sands R&D Expensed	35	27	36	38	27	- 6.7	0	0	0	0	0	-
E&D Expensed	824	750	876	981	740	- 2.6	0	0	0	0	0	-
Depreciation	686	723	841	884	907	7.2	572	612	686	698	715	5.7
Depletion	1080	1410	1733	2230	1829	14.1	0	0	0	0	0	-
Write-offs and amortization	1043	603	528	871	831	- 5.5	61	30	170	- 75	16	- 29.0
Non-cash Charges and E&D	3668	3513	4015	5004	4334	4.3	634	642	856	623	730	3.6
Income before Taxes	6294	7832	8538	1018	3546	- 13.4	- 307	420	353	1473	1554	-
Federal Income Tax	2246	2302	2482	757	971	- 18.9	- 346	- 17	107	346	431	-
Provincial Income Tax	386	608	549	19	171	- 18.4	- 118	- 3	19	73	120	-
Current Income Tax	2631	2910	3031	777	1142	- 18.8	- 444	- 20	126	420	551	-
Income after Current Income Tax	3663	4923	5507	242	2403	- 10.0	137	441	227	1053	1004	64.6
Deferred Income Tax	1215	1824	1768	68	399	- 24.3	213	86	- 116	- 4	108	- 15.7
Net Income after Taxes	2448	3099	3739	173	2004	- 4.9	- 77	355	344	1057	896	-
Extraordinary Gains	74	6	- 807	- 1969	167	22.5	- 9	35	- 129	213	4	-
Net Income after Extraordinary Items	2522	3106	2933	- 1796	2171	- 3.7	- 86	389	215	844	900	-
Internal Cash Flow	7330	8436	9522	5246	6738	- 2.1	770	1082	1083	1676	1734	22.5

	1983	1984	Other and Foreign Operations		1987	Growth Rate	1983	1984	Total Operations		1987	Growth Rate
			1985	1986					1985	1986		
Total Revenues	4626	4776	4914	4459	4135	- 2.8	59120	63193	66958	47864	49223	- 4.5
Royalties and other Payments	0	0	0	0	0	-	6080	6442	6346	3127	3017	- 16.1
PGRT and other taxes	76	100	169	108	111	9.7	3878	4267	4493	3532	4069	1.2
Total Revenue after Royalties	4549	4677	4745	4351	4024	- 3.0	49162	52484	56118	41205	42136	- 3.8
Cost of Goods Sold	1679	1243	1360	1379	1593	- 1.3	27031	26811	28337	19361	19152	- 8.3
Interest Expenses	774	780	689	934	551	- 8.2	2480	2765	2464	2754	2264	- 2.3
Operating Costs	1321	1298	1536	1228	908	- 9.0	7730	8278	9603	9137	8863	3.5
R&D Costs (excluding Oil Sands)	10	10	7	11	3	- 22.9	122	142	156	153	135	2.5
Other Expenses	182	284	186	256	225	5.4	949	1019	829	1140	814	- 3.8
Oil Sands R&D Expensed	0	0	0	0	0	-	35	27	36	38	27	- 6.7
E&D Expensed	63	58	68	30	44	- 8.6	887	808	944	1011	784	- 3.0
Depreciation	318	373	281	322	267	- 4.3	1576	1708	1808	1903	1889	4.6
Depletion	252	297	470	668	332	7.1	1332	1707	2203	2898	2161	12.9
Write-offs and Amortization	830	115	203	186	- 85	-	1935	748	901	982	761	- 20.8
Non-cash Charges and E&D	1463	844	1022	1206	558	- 21.4	5765	4999	5893	6833	5622	- 0.6
Income before Taxes	- 881	217	- 56	- 663	187	-	5085	8470	8836	1828	5287	1.0
Federal Income Tax	54	7	16	- 172	- 52	-	1953	2292	2605	931	1351	- 8.8
Provincial Income Tax	- 15	- 49	- 26	- 32	- 45	-	253	556	542	60	245	- 0.7
Current Income Tax	39	- 42	- 9	- 204	- 97	-	2206	2848	3148	992	1596	- 7.8
Income after Current Income Tax	- 919	259	- 47	- 459	284	-	2879	5623	5688	836	3691	6.4
Deferred Income Tax	- 30	129	69	- 7	7	-	1398	2038	1721	58	514	- 22.1
Net Income after Taxes	- 889	130	- 116	- 452	277	-	1482	3584	3967	778	3177	21.0
Extraordinary Gains	- 0	92	- 134	- 1302	29	-	65	132	- 1069	- 3484	200	32.6
Net Income after Extraordinary Items	- 889	222	- 250	- 1754	306	-	1547	3717	2898	- 2705	3378	21.6
Internal Cash Flow	544	1103	976	747	842	11.5	8644	10622	11581	7669	9313	1.9

B18**Sources and Uses of Funds: 1983 - 1987** in millions of dollars

	1983	1984	1985	1986	1987	Growth Rate
Cash Generated by Operations	8644	10622	11581	7669	9313	1.9
Net Increase in Long-term Debt	1839	4227	2067	1900	768	-19.6
Issue of Shares	2182	1815	2010	2359	1714	-5.9
Grants (PIP and others)	1667	1892	1860	1131	459	-27.6
All Other Sources	2991	5172	4143	5113	7492	25.8
Working Capital Decrease	1524	931	2815	3333	1989	6.9
Total Sources of Funds	18848	24659	24475	21505	21735	3.6
Upstream Capital Expenditures	6798	7967	9287	6221	5639	-4.6
Downstream Capital Expenditures	1611	897	751	725	791	-16.3
Other Canadian Capital Expenditures	1195	926	881	374	426	-22.8
Total Capital Expenditures in Canada	9603	9790	10919	7319	6856	-8.1
Capital Expenditures in U.S.A.	328	317	720	145	150	-17.8
Other Foreign Capital Expenditures	442	360	473	425	346	-6.0
Total Foreign Capital Expenditures	770	677	1193	570	495	-10.4
Total Company Capital Expenditures	10373	10466	12112	7889	7352	-8.2
Dividends:						
Common Shares	96	34	1514	2260	1160	86.2
Preferred Shares	157	162	283	312	343	21.6
Total	1257	1348	1798	2573	1502	4.6
Reduction of Equity	548	160	528	452	354	-10.4
Total Dividends and Equity Reduction	1805	1507	2325	3025	1856	0.7
Net Decrease in Long-term Debt	1545	2560	1884	2901	4429	30.1
All Other Applications	3111	5628	5941	6778	6070	18.2
Working Capital Increase	2013	4499	2212	912	2033	0.2
Total Application of Funds	18848	24659	24475	21505	21739	3.6

Appendix C Glossary of Terms

Acquisitions – the acquisition of shares of other petroleum companies or the purchase of assets from such companies. Capital outlays for these purposes are included under the category 'All Other Uses of Funds' in monitoring reports. (Acquisitions)

All Other Sources of Funds – proceeds from the sale of assets or long-term investments and pre-payments received for future production and the reclassification of sizeable short-term debt to long-term such as occurred in 1984. (Autres sources de fonds)

All Other Uses of Funds – includes acquisitions, purchases of used machinery and equipment, and long-term investments. (Autres affectations de fonds)

Amortization – the charge to expense, over time, of assets, other than through depreciation, depletion, and exploration and development expensed to current operations. It also includes gains or losses on disposal of assets and write-downs of assets. (Amortissement)

Canada Lands – physical areas of Canada outside provincial boundaries. (Terres du Canada)

Canadian Control – in general, a company is Canadian-controlled when 50% or more of its voting shares are held by Canadian residents either directly or indirectly. In a few exceptional cases, when a significant block of shares is held by Canadian residents and the remaining shares are widely held, a company may be effectively Canadian-controlled even though more than 50% of the voting shares are held by non-residents. (Contrôle canadien)

Canadian Exploration and Development Incentive Program (CEDIP) – provides direct assistance to companies conducting exploration and development activities in Canada. Beginning April 1, 1987, CEDIP provides a cash payment for 33 1/3 per cent of exploration and development expenses anywhere in Canada, up to a maximum of \$10 million annually per company. Fiscal measures proposed under the Income Tax Reform of June 1987, provide for the phasing out of the program over approximately the same period as earned depletion; i.e. expenses incurred after June 30, 1989 would no longer qualify for CEDIP incentives. (Le programme canadien d'encouragement à l'exploration et à la mise en valeur)

Canadian Ownership – the proportion of the total voting shares of a company held, either directly or indirectly (through other corporations), by Canadian residents. (Participation canadienne)

Capital Employed – the net book value of total assets, less current liabilities. (Capital utilisé)

Capital Expenditures – investments in new machinery, equipment, structures and resource properties, whether capitalized or charged directly to current operations, as well as intangibles (e.g. cost of leased equipment), capitalized interest and capitalized repair expenditures. (Dépenses de capital)

Current Income Tax – the portion of the provision for income taxes, both federal and provincial, pertaining to the reporting period and assumed to be currently due. (Impôt sur le revenu courant)

Debt/Equity Ratio – the ratio of long-term liabilities (over one year) to shareholders' equity (share capital plus retained earnings) at the end of a period. Depending upon their terms and conditions, preferred shares may be classified as either debt or equity (see 'long-term debt'). (Rapport d'endettement)

Deferred Income Taxes – taxes accrued and reflected as an expense in the income statement, but not payable in the financial reporting period. Income taxes are deferred, for example, when companies write off capital assets (using capital cost allowances) for income tax purposes at rates that exceed those employed in preparing their financial reports. (Impôt reporté)

Depletion – the amount charged to expense in the company's financial statements which relates to depletable assets that have been capitalized. This is not the earned depletion allowance calculated for income tax purposes. (Epuisement)

Depreciation – the amount charged to expense which relates to depreciable assets that have been capitalized. This is not the amount of capital cost allowance that is used to compute depreciation for income tax purposes. (Dépréciation)

Development Expenditures – includes drilling and well completion costs in an area of already proven oil or natural gas reserves, expenditures on field gathering and separation systems, and the cost of acquiring proven reserves. (Dépenses de mise en valeur)

Downstream Segment – includes refining, marketing, transportation and petrochemical operations. (Secteur aval)

Energy Mining – uranium and coal mining (excludes oil sands mining). (Extraction minière des ressources énergétiques)

Equity – the book value of shareholders' paid-up capital, contributed surplus and retained earnings. (Avoir propre)

Exploration Costs – include all lease fees and land acquisition costs, geological and geophysical expenditures, and exploratory drilling costs whether capitalized or expensed. Exploratory drilling is generally defined as the drilling of a well outside a proven area, or within a proven area but to a previously untested zone, in order to determine whether oil or gas reserves exist. Also included are costs of dry wells, casing and other materials and equipment abandoned in place. (Frais d'exploration)

External Sources of Funds – funds obtained from sources other than internal cash flow. Long-term debt and equity are the main examples. (Sources externes de fonds)

Flow-through Shares – a financial vehicle that allows a resource company to issue shares and thereby raise funds for exploration and development expenditures. In turn, the company renounces the associated tax expenses such as Canadian exploration expenses (CEE), Canadian development expenses (CDE) and Canadian oil and gas property expenses (COGPE) to the purchasers of the flow-through shares. Flow-through arrangements permit investors to deduct resource expenses incurred by the issuing corporation against income from other sources. (Actions accréditatives)

Full Cost Accounting – an accounting method by which all costs incurred in prospecting for reserves and in acquiring, exploring and developing properties within cost centres are initially capitalized and only charged to expense as the reserves deemed to be related to those costs are produced. Costs incurred include prospecting, leasing, acquisition, retention, exploration and development costs, and associated indirect costs (i.e. general and administrative costs). Operating costs are expensed as incurred. (Méthode de capitalisation du coût entier)

Integrated Companies – individual companies that have significant revenues in both the upstream and downstream segments. (Sociétés intégrées)

Internal Cash Flow – net income after tax plus exploration and development expenditures expensed in the current period, depreciation, depletion, amortization and deferred income taxes. (Ressources d'autofinancement)

Junior Producers – companies that are predominantly exploration and production oriented and that individually generate less than 1% of industry upstream revenues. (Petits producteurs)

Long-term Debt – debt that has a maturity date greater than one year. Preferred shares may be treated as long-term debt when they are redeemable for a fixed amount without conversion privileges or voting rights. (Dettes à long terme)

Non-cash Charges – items expensed in the reporting period that do not require an actual financial outlay in that period, such as depreciation, depletion and amortization. (Frais non monétaires)

Non-conventional Heavy Oil – deposits of oil of a density usually greater than 934 kg/m³ that are for the most part recoverable through enhanced recovery methods. Canadian deposits of heavy oil are typically in the range of 935 to 985 kg/m³. Main centres are Cold Lake and Lloydminster. (Pétrole lourd non classique)

Oil Sands – crude bitumen resources from deposits that are generally solid unless heated and are of a density usually greater than 985 kg/m³. Athabasca, Peace River, Wabasca, Cold Lake and Buffalo Head Hills are the main Canadian resource areas. (Sables pétrolières)

Other Canadian Operations – include drilling services, coal and uranium mining, metal mining, and other non-petroleum related activities. In addition, corporate activities may be included here. (Activités autres au Canada)

Petroleum Incentives Program (PIP) – provided direct incentive payments to enterprises conducting exploration and development activities in Canada. The level of incentive varied according to the area of activity and was higher for enterprises that were Canadian controlled and had specified levels of Canadian ownership as determined under the Canadian Ownership and Control Determination Act. The Government of Alberta administered and paid incentives for activities within Alberta and the Petroleum Incentives Administration of the Government of Canada funded and administered the program elsewhere in Canada. Fiscal measures agreed upon under the Western Accord included the termination of the PIP program on March 31, 1986 for all activities formerly eligible to receive grants, other than exploration expenses incurred in drilling frontier wells required to satisfy commitments under existing Exploration Agreements on Canada Lands. These eligible frontier wells continued to qualify for PIP during a further grandfathering period which was terminated December 31, 1987. (Programme d'encouragement du secteur pétrolier)

Petroleum and Gas Revenue Tax (PGRT) – a 13.3% tax on production revenue net of operating costs, non-Crown royalties and, where Crown royalties or taxes based on production were payable, a 25% resource allowance. Qualifying tertiary recovery projects also reduced the tax base by eligible capital costs incurred after 1982 to the extent of pool taxable revenue. In April 1986, the existing \$500,000 small producers' credit was increased to \$2 million and the deduction for individuals of \$10,000 of resource income from the PGRT was increased to \$40,000. The Syncrude and Suncor oil sands plants were also granted a zero rate of PGRT until the end of 1986. Companies in a non-profit position were allowed to offset unused new exploration and development expenditures against the PGRT. The Western Accord would have phased PGRT out of existence by

January 1, 1989, but on September 8, 1986 the Government of Canada announced its termination effective October 1, 1986. PGRT was non-deductible for income tax purposes. (Taxe sur les recettes pétrolières et gazières)

Production Expenditures – all expenditures relating to the production of crude oil and natural gas. Expenditures on natural gas processing plants are included. (Dépenses de production)

Senior Producers – companies that are predominantly exploration and production oriented and that individually generate more than 1% of industry upstream revenues. (Grands producteurs)

Successful Efforts Accounting – an accounting method by which only costs resulting directly in identifiable future benefits through discovery, acquisition or development of reserves are capitalized. Costs that do not provide identifiable future benefits are expensed as incurred, or are written off when the properties are determined to be non-productive. Such costs include those relating to geological and geophysical studies, retention of undeveloped properties, and non-productive exploration and development efforts. (Méthode de capitalisation du coût de la recherche fructueuse)

Upstream Segment – activities and operations related to the search for, and development, production, extraction and recovery of crude oil, natural gas, natural gas liquids and sulphur, as well as the production of synthetic oil. (Secteur en amont)

Working Capital – current assets (cash, short-term investments, accounts receivable, inventories) less current liabilities (accounts payable, debts and obligations maturing in less than one year). (Fonds de roulement)

Appendix D PMA Terms of Reference

Mandate of the Petroleum Monitoring Agency

The Petroleum Monitoring Agency (PMA) was established initially in 1980 under the Inquiries Act and continues under the Energy Monitoring Act⁽¹⁾ after February 1983. The Agency's goals are to provide the federal government and Canadians generally with comprehensive and objective information on and analysis of the financial performance of the petroleum industry in Canada:

- *(a) to enable the Government of Canada to better plan and develop policies for the management of Canada's energy supplies and resources, and,
- (b) to provide the Government of Canada and Canadians generally with assurances that those policies are being pursued and are effective.*⁽²⁾

These goals are accomplished by publishing semi-annual and annual reports based on information received directly from all but the smallest oil and gas companies doing business in Canada.

To provide impartiality of reporting and maintain credibility among users, the PMA was created as a separate and independent Agency, with its Chairman reporting directly to the Minister of Energy, Mines and Resources.

The Act, at subsection 5(1), sets out that energy enterprises shall file, twice a year, returns providing data and information relating to:

- (a) ownership and control,
- (b) sources and application of funds,
- (c) exploration, development, production, processing, refining and marketing,
- (d) cost and revenues,
- (e) deductions, credits, allowances and carry forwards provided under the Income Tax Act,
- (f) the distribution and disposition of its revenues and profits,
- (g) resources, reserves and properties,
- (h) ownership or interest in any other enterprise,
- (i) research and development programs, and
- (j) other prescribed matters relating to oil and gas production, refining and marketing, and the funds derived from such activities.

Energy enterprises are defined as individuals, corporations, partnerships, trusts or organizations engaged in the exploration for, development, refining and marketing of oil and gas and having consolidated gross annual revenues or assets in excess of ten million dollars. Regulations prescribe that gross revenues and assets be determined according to accounting standards set out in the Canadian Institute of Chartered Accountants Handbook. Currently only corporations are surveyed by the Agency. Each energy corporation is required to report on a consolidated basis on the activities of corporations it controls or owns.

Sources of Data and Information

The data published in the *Petroleum Monitoring Report* are aggregate data derived mainly from survey schedules prescribed by regulations.⁽³⁾ Since part of the Agency's information gathering function falls within areas covered by Statistics Canada, a number of data sharing agreements were negotiated between PMA and Statistics Canada under section 11 of the Statistics Act. These agreements reduce the industry's response burden in relation to the Agency's overall information requirements. Information also flows from PMA to Statistics Canada. Current data sharing agreements relate to:

- ownership and control of energy enterprises,
- capital structure,
- international flows of funds,
- research and development expenditures,
- exploration, development and capital expenditure intentions,
- quarterly corporate financial statistics, and
- capital expenditures and operating costs.

The first five of these involve transmission of information to the PMA; the last includes information on such subjects as exploration, development and production expenditures, and royalties from the PMA to Statistics Canada.

Data Coverage

Industry gross revenues covered by the PMA through aggregation of returns from 129 reporting enterprises account for 92% of upstream industry revenues as determined by Statistics Canada. The remaining 8% of industry revenues accrue to firms having revenues or assets below the Agency's current reporting

(1) S.C. 1980-81-82-83, c. 112.

(2) P.C. 1980-2137.

(3) Currently prescribed schedules are contained in regulation SOR/87-462.

thresholds. The high degree of coverage of industry revenues and the inclusion of all but the smallest energy enterprises enable conclusions drawn from Agency aggregates to be applied to the industry as a whole. Degrees of coverage of other performance indicators are presented below.

Comparison of PMA Data with 1987 Industry Aggregates

Percentage of industry aggregates covered

Upstream Production Revenues	92
Upstream Expenditures in Canada	90
Production Volumes:	
Crude Oil and Liquids	92
Marketable Natural Gas	90
Refined Product Sales Volumes	98

Comparison of Survey Results - PMA vs. Statistics Canada

The petroleum industry's financial performance is regularly compared to that of other sectors of the economy using aggregate data from Statistics Canada. Net income and rates of return information provided in Chapters 1 and 2 of this report will differ slightly from the results shown in Chapter 3 and in Appendix A14, because the latter are based on Statistics Canada data.

Petroleum industry data from Statistics Canada, while covering a greater number of companies than the PMA survey, exclude government business enterprises as well as the foreign activities of Canadian petroleum companies. The PMA survey covers the global activities of petroleum companies operating in Canada, including Crown corporations, provided these companies meet the minimum requirements in terms of assets and revenues. In addition, though Statistics Canada may make adjustments to company reported data, the PMA reports only on the industry's activities as they are submitted. For example, in 1983, a write-down by one large Canadian-controlled company of assets of \$1 billion was treated as 'extraordinary' by Statistics Canada, whereas the Agency accepted the entry as 'ordinary', as reported by the company.

Regarding rates of return, both agencies determine return on capital employed by adding back to net income the after-tax portion of interest on long-term debt. While the PMA produces this calculation for each company individually, using the statutory tax rate on that portion of interest expense which would increase net income, the add back on Statistics Canada aggregate industry results must rely on the average effective tax rate, i.e. current taxes as a percentage of net income before taxes.

Ownership and Control Determination

The Agency publishes annually information on the level of Canadian ownership and control of the oil and gas industry in Canada. The methodology and sources of information underlying its analyses are summarized below.

In the process of control determination, the Agency has based its definition on whether Canadian or foreign shareholders have potential control over a reporting enterprise's overall operations. Control is a contractual right conferred upon a person, or group of persons, to direct, within the limitations of relevant statutes, in the present or at some future date, the affairs or management of a company, on a day to day basis or otherwise, usually through the appointment of a majority of a board of directors. Control is not to be confused with managerial responsibility for the firm. The concept of control emerged in order to recognize the separation in modern corporations between managers and shareholders. Shareholders assert control over management through the board of directors and the shareholders' meeting.

Control that is exercised by, for instance, nominating and electing the majority of the directors is active control. Control is just as real when the shareholder with a continuing right to intervene chooses instead, for whatever reason, not to exercise that right. The latter unexercised option to take active control is called potential control. For the purposes of the PMA, the two types of control - active and potential - are equivalent. Both types are called control. The Canadian Business Corporations Act similarly embraces the concept of potential control within its definition of control which refers to sufficient votes, "if exercised, to elect a majority of the directors of the body corporate."

While control is generally based on the ownership of 50% or more of voting shares, it is possible for control to be exercised with a smaller ownership block. A person who owns at least 51% of the voting shares is said to have "de jure" control. One who owns less than 50% of the voting shares, but is able to alter the composition of the board of directors and/or management, is said to have "de facto" control. Statistics Canada assigns "de facto" control of a public corporation, for the purposes of the Corporations and Labour Unions Return Act (CALURA), to a person owning at least 20% of the outstanding voting shares when no other two shareholders together own as much as 20%.⁽¹⁾ The PMA methodology for determining control in such cases is consistent with that used by Statistics Canada. "De facto" control may also be conferred upon a person, or group of persons, owning less than 51% of the voting shares of a public or private corporation through several other mechanisms:

- (a) *Blocks of voting shares* – Two or more shareholders whose holdings together sum more than 50 % of total shares and who generally act in concert.
- (b) *A shareholders' agreement* – An agreement among some or all shareholders to vote or act in certain ways in various contingent circumstances, especially in relation to naming directors.
- (c) *Options* – A minority shareholder enjoys the right at any time to acquire additional voting shares to raise his holdings to 51% or more of the outstanding voting shares.
- (d) *Personal Relationships* – Where two shareholders are related by blood relationship, marriage or adoption, they may be deemed to constitute a voting group.
- (e) *Interlocking Directorships* – When corporation A owns at least a minimum percentage of voting shares of corporation B, and is the single largest minority shareholder of corporation B, and both corporations share a large number of common directors, corporation A is said to control corporation B.

For purposes of determining the industry-wide level of control, 100% of the relevant yardstick of the controlled company is assigned to the appropriate control category. Thus, regardless of the percentage ownership of voting rights by non-residents, if the company is effectively controlled by non-residents, then for statistical purposes 100% of its activities are assigned to the foreign-controlled sector. To illustrate, several integrated companies included in this report, though all foreign controlled, have varying degrees of Canadian ownership (up to 30%). However, when measuring the level of control the entirety of their relevant corporate activities is assigned to the appropriate control sector.

In the case of ownership, that percentage of the relevant yardstick which represents the beneficial ownership of formal equity by non-residents is assigned to the foreign-owned category, while that of Canadian residents is assigned to the Canadian-owned category.

The most commonly used yardsticks are upstream or total petroleum-related revenues (upstream plus downstream). Ownership and control are generally measured on gross revenues recognizing that these best reflect economic activity and that they are a stable proxy for net economic benefits over time. For example, the deduction of royalties from gross petroleum revenues would have little or no impact on the relative distribution of revenue between Canadian and foreign owners.

Other measurement bases such as assets or capital employed do exist but suffer from the deficiencies of relying upon historical 'book' values rather than current market value, and of being subject to the different accounting techniques used in the petroleum industry such as the full cost and successful efforts methods.

The Agency has access to ownership and control information collected under CALURA from those enterprises which report under the EMA. CALURA requires detailed disclosure of ownership information from all owners of blocks of shares equal to or greater than 5% of total voting shares. Should a reporting energy enterprise fail to file a timely return under CALURA, Regulation SOR/85-328 authorizes the Agency to obtain the ownership and control information directly.

⁽¹⁾ *The Ownership, Control, and Country of Control of Corporations*, Statistics Canada, June 4, 1987, p. 8.

Appendix E CICA Guideline on Full Cost Accounting in the Oil and Gas Industry

Generally Accepted Accounting Principles (GAAP), established by the Canadian Institute of Chartered Accountants (CICA) for companies conducting business in Canada, allow two different methods of reporting for exploration and development costs in the petroleum industry: "successful efforts" and "full cost".

The successful efforts method assumes that only those exploration costs directly resulting in the discovery of proved reserves and related development costs should be capitalized and subsequently amortized on a unit of production basis as a charge against the net revenue of the producing wells in the cost centre explicitly linked to those proved reserves. Costs of unsuccessful exploration are written-off when the property is determined to possess no reserves, and other expenditures such as those for geological and geophysical studies, and land retention costs which do not directly yield proved reserves are expensed in the period incurred.

The full cost method assumes that all costs incurred in acquiring, exploring and developing properties in the search for oil and gas, whether proved reserves are found or not, should be capitalized and subsequently amortized as a charge against production revenues in a cost centre. This method defers to future periods the write-off of both successful and unsuccessful exploration costs and other expenses not directly associated with proved reserves. In the short term, the method decreases expenses as compared to the successful efforts method and consequently raises earnings. Over the longer term, the full cost firm's costs are equal to those of successful efforts, but due to its higher cost base and the uncertainty about future production levels, productivity and prices, the method may result in a significant overstatement of asset values unless periodic corrections are made to the capitalized costs carried forward.

In its new guideline, which became effective in September 1986, the CICA Accounting Standards Committee did not attempt to resolve whether full cost, successful efforts or some other accounting method is preferable. The variations in the application of the full cost accounting method had become so great however, that the guideline was developed to "narrow the range of acceptable alternatives". The guideline works in two ways; it specifies the costs which should be capitalized and amortized, and limits, through a 'ceiling test' calculation, the unamortized cost that can be retained on companies' balance sheets.

The guideline clarifies that the capitalized costs subject to amortization are to be depleted or depreciated on a unit of production basis, and should include:

- (a) all exploration and development costs (other than the costs of unproved properties and excluded major development projects) less accumulated depletion and depreciation,
- (b) estimated future costs of developing proved reserves, and
- (c) estimated dismantlement and abandonment costs, net of salvage values.

The costs of proved properties should be included even if immediate production or marketing is not possible, as should dry hole costs and the costs of impaired properties, i.e. those showing or believed to possess smaller reserves than initially expected. The transfer of the costs of acquiring, holding and exploring unproved properties to capitalized costs subject to depletion and depreciation charges should occur regularly as reserves are proved or properties are determined to be impaired. Provision for depletion and depreciation is to be determined on a consolidated basis across all cost centres each time annual or quarterly financial statements are issued.

The ceiling test⁽¹⁾ is a cost recovery test which permits financial statement users to assume that no future losses will result from the production of presently held proved reserves and the exploration and development or sale of unproved properties and major development projects, if all current estimates such as for prices, productivity, production levels, and future development costs used in the preparation of the financial statement are proven accurate by future events.

The amendments to the ceiling test suggested by the guideline dealt with the prices used to calculate future net revenue, and the definition of cost centres.

Firstly, whereas until now the prices used in estimating future net revenue from *proved reserves* ranged from current prices to estimates of future prices expected by reservoir evaluators, the guideline stipulates that the industry should use the price as of the measurement date (date of the balance sheet) or the average price for a period not exceeding 12 months prior to any one of the measurement dates, the date of issue of financial statements, or the date of public announcement of earnings. If a price other than that prevailing on the measurement date is used, the price used should be disclosed as should any write-off which would have resulted had the measurement date price been used.

Secondly, prior to the guideline, wide variation in the definition of 'cost centre' was evident among practitioners of full cost accounting methods, and seriously limited comparability of financial statements. Definitions of cost centres previously ranged from an area of a country, to groupings of countries, to the entire world. Such definitions allowed companies to carry properties, the capitalized cost of which (for example, in regions or countries where finding costs were higher) exceeded future net revenue because the ultimately recoverable amount at the enterprise level exceeded total capitalized cost when future revenues from properties in regions or countries having lower finding costs were included. The CICA guideline requires the cost centre of a full cost company to be an enterprise's oil and gas activities within the geographical boundaries of a country and there is to be only one cost centre for each country.

Most Canadian-controlled companies use the full cost method while those in Canada which are foreign controlled usually use the successful efforts method. Full cost companies in Canada, during 1986, were adversely affected by the fall in crude oil prices and the consequent reduction of asset values, in turn requiring write-offs in accordance with the guideline.

(1) The ceiling test is used to limit the aggregate capitalized cost which may be carried forward, and amortized against future net revenue. The test has two components. The 'cost centre ceiling test' compares, for each cost centre, the amount at which the properties are capitalized, to the future net revenue plus the cost of major development projects and unproved properties. Any excess is written-off to expense. The second component, the 'enterprise ceiling test' compares, for all cost centres, the net book value of properties less deferred income taxes to the after tax ultimately recoverable amount. Any excess is allocated between cost centres and written-off as an after tax charge. The pre-tax amounts to be written-off are also to be deducted from the net book value of properties and deferred income taxes.

Appendix F Reporting Energy Enterprises

AGIP Canada Ltd.	Maxus Energy Canada Inc.
Alberta Energy Company Ltd.	Mobil Oil Canada, Ltd.
Alberta Oil Sands Equity	* Mohawk Oil Co. Ltd.
Altana Exploration Company	Murphy Oil Company Ltd.
Amerada Minerals Corporation of Canada Ltd.	New Grade Energy Inc.
American Eagle Petroleum Ltd.	Norcen Energy Resources Limited
American Trading and Production Corporation	North Canadian Oils Limited
Amoco Canada Petroleum Company Ltd.	Northcor Energy Ltd.
Anadarko Petroleum Of Canada Ltd.	Norwich Resources Canada Ltd.
Anderson Exploration Ltd.	Novalta Resources Ltd.
Asamera Inc.	Nova Scotia Resources Limited
AT&S Exploration Ltd.	Numac Oil & Gas Ltd.
ATCOR Ltd.	Oakwood Petroleum Ltd.
Barnwell Of Canada, Limited	Ocelot Industries Ltd.
Bow Valley Industries Limited	Omega Hydrocarbons Ltd.
Bowtex Energy Corporation	Page Petroleum Ltd.
BP Canada Inc.	Paloma Petroleum Ltd.
Bralorne Resources Limited	Panarctic Oils Ltd.
Canada Northwest Energy Limited	PanCanadian Petroleum Limited
Canadian General Electric Company Limited	* Parkland Industries Ltd.
Canadian Hunter Exploration Ltd.	Pecten Canada Ltd.
Canadian-Montana Gas Company Limited	Pembina Resources Limited
Canadian Occidental Petroleum Ltd.	Pennzoil Petroleum Limited
Canadian Roxy Petroleum Ltd.	* Petro-Canada Inc.
Canterra Energy Ltd.	Petrorep (Canada) Ltd.
Carlyle Energy Ltd.	* Petrosar Limited
Chauvco Resources Ltd.	Phillips Petroleum Canada Ltd.
* Chevron Canada Limited	Phillips Petroleum Co. Western Hemisphere
Chevron Canada Resources Limited	Phillips Petroleum Resources Ltd.
Chevron Standard Limited	Placer CEGO Petroleum Limited
Chieftain Development Co. Ltd.	Poco Petroleum Ltd.
CN Exploration Inc.	Ranchmen's Resources Ltd.
Columbia Gas Development Of Canada Ltd.	Ranger Oil Limited
Conoco Canada Ltd.	Renaissance Energy Ltd.
Conwest Exploration Company Limited	Roan Resources Limited
Cooperative Energy Development Corporation	Royal Trust Energy Corporation
Coseka Resources Limited	Saskatchewan Oil & Gas Corporation
Czar Resources Ltd.	Sceptre Resources Limited
DCP Canada Inc.	* Shell Canada Limited
Dekalb Petroleum Corporation	SOQUIP
Denison Mines Limited	Star Oil & Gas Ltd.
Dome Petroleum Limited	Sulbath Explorations Ltd.
Dorset Energy Corporation	Sulpetro Limited
Drummond Oil & Gas Ltd.	* Suncor Inc.
Dynamar Energy Limited	TCPL Resources Ltd.
Dynex Petroleum Ltd.	* Texaco Canada Inc.
Encor Energy Corporation Ltd.	Tintagel Energy Corporation
Enron Oil Canada Ltd.	Total Petroleum (North America) Ltd.
Excel Energy Inc.	Canadian Division
* Federated Co-operatives Limited	Trans-Canada Resources Ltd.
Forest Oil Corporation (Canada Division)	Trillium Exploration Corporation
Gulf Canada Resources Ltd.	Trilogy Resources Corporation
Hamilton Brothers Canadian Gas Company	Triton Canada Resources Ltd.
Harvard International Resources Ltd.	* Turbo Resources Limited
Home Oil Company Ltd.	* Ultramar Canada Inc.
* Husky Oil Ltd.	Ultramar Oil and Gas Canada Limited
* Imperial Oil Limited	Union Pacific Resources Ltd.
Inter-City Gas Corporation	United Canso Oil & Gas Ltd.
Inverness Petroleum Ltd.	Universal Explorations (83) Limited
* Irving Oil Limited	Unocal Canada Ltd.
J.M. Huber Corporation	Voyager Energy Inc.
Kerr-McGee Corporation	Wainoco Oil & Gas Limited
Koch Exploration Canada, Ltd.	Webb International Minerals Inc.
LASMO Canada Inc.	Westar Petroleum Ltd.
LL&E Canada Ltd.	Westburne Petroleum & Minerals Ltd.
Luscar Limited	Westcoast Petroleum Ltd.
Maligne Resources Limited	Western Decalta Petroleum (1977) Limited
Mark Resources Inc.	Westmin Resources Limited

* Denotes companies included in group of 'Integrators and Refiners'.
All other companies belong to the category of 'Oil and Gas Producers'.